HABITAT CONSERVATION PLAN AND ENVIRONMENTAL ASSESSMENT FOR A SECTION 10(a) PERMIT FOR INCIDENTAL TAKE OF THE ENDANGERED CACTUS FERRUGINOUS PYGMY-OWL FOR THE PROPOSED SKYRANCH PROJECT IN THE TOWN OF MARANA, PIMA COUNTY, ARIZONA

Submitted by:
Exeter LXI, L.L.C.

Prepared by:
Thomas Olsen Associates, Inc.

November 19, 2003

HABITAT CONSERVATION PLAN
AND
ENVIRONMENTAL ASSESSMENT
FOR

A SECTION 10(a) PERMIT FOR INCIDENTAL TAKE OF THE ENDANGERED CACTUS FERRUGINOUS PGYMY OWL *(Glaucidium brasilianium cactorum)* FOR THE PROPOSED SKYRANCH PROJECT IN THE TOWN OF MARANA, PIMA COUNTY, ARIZONA

Submitted by:

Exeter LXI, L.L.C.
5215 N. Sabino Canyon Road, Suite 100
Tucson, AZ 85750
(520) 529-6644

Prepared by:

Thomas Olsen Associates, Inc.
110 S. Church Avenue, Suite 6320
Tucson, AZ 85701
(520) 623-2800

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ABBREVIATIONS

AGFD	Arizona Game and Fish Department
Applicant	Exeter LXI, L.L.C. and its Successors and Assigns
CE	Conservation Easement
CFPO or pygmy-owl	Cactus Ferruginous Pygmy-Owl
CH	Critical Habitat
Corps	U.S. Army Corps of Engineers
County	Pima County, Arizona
EA	Environmental Assessment
ECM(s)	Environmental Compliance Monitor(s)
ESA	Endangered Species Act
Exeter	Exeter LXI, L.L.C.
HCP	Habitat Conservation Plan
IA	Implementing Agreement
ITP	Incidental Take Permit
Marana	Town of Marana
NEPA	National Environmental Policy Act
Permittee	Exeter LXI, L.L.C. and its Successors and Assigns
Project	103-Acre Portion of Property to be Developed
Property	512-Acre Skyranch Property
Reserve	409-Acre Portion of Property to be left in Natural State
ROW	Right-of-Way
SDMSHCP	Sonoran Desert Multiple Species Habitat Conservation Plan
Secretary	Secretary of the Interior
SMA	Special Management Area
T&E species	Species Listed as Threatened or Endangered Species Under the ESA
TOA, Inc.	Thomas Olsen Associates, Inc.
USFWS	U.S. Fish and Wildlife Service

DEFINED BIOLOGICAL TERMS

Active Nest (or active breeding territory)
A nest in which eggs have been laid (Postupalsky 1974).

Activity Center
Refers to the centroid of CFPO observations made following accepted biological monitoring procedures that indicate that an individual CFPO or CFPO pair has established and is (are) defending a territory at that location (Westland Resources 2003).

Breeding CFPO
A paired CFPO of either sex (USFWS, pers. comm.).

Breeding Territory
An area *occupied* by one mated pair of birds during the breeding season, containing one or more nests. Each breeding territory indicates the known presence of a mated, territorial pair of potential breeders (Postupalsky 1974).

Dispersal
Movement of individuals to new living areas. This includes both the initial movement from the place of birth to the first site at which a bird will attempt to breed (natal dispersal) and subsequent movement from one breeding location to another (adult dispersal) (Sibley, Elphick, & Dunning 2001).

Disperser or Dispersing CFPO
An individual CFPO which is in the act of dispersing and has not yet established a territory.

Home Range
The area that an animal uses in the course of its annual activities. Not necessarily defended (Sibley, Elphick, & Dunning 2001).

Nest
A structure built or occupied by birds for the purposes of breeding. For cavity nesters, a tree hollow, box, etc. (Postupalsky 1974).

Nest Site
The physical location of a nest.

Non-Breeding CFPO
An unpaired CFPO of either sex (USFWS, pers. comm.).

Occupied
A specific area is *occupied* by CFPO if CFPO are currently physically present (see occupy).

Occupied Breeding Territory
A territory (defined below) that contains one occupied nest (defined below) (Postupalsky 1974).

Occupied Nest
Any nest at which at least one of the following activity patterns was observed during a given breeding season:

a. Young were raised;

b. Eggs were laid;
c. One adult observed sitting low in the nest, presumably incubating;
d. Two adults present on or near the nest, regardless of whether or not it had been repaired during the season under consideration;
e. One adult and one bird in immature plumage at or near a nest, if mating behavior is observed. This category only applies to species in which immatures can be distinguished in the field;
f. A recently repaired nest. (Postupalsky 1974).

Occupy
Occupy is defined as "to dwell or reside in, be a tenant of" (Morris 1981)[1].

Territory
A defended area in which an animal resides (Sibley, Elphick, & Dunning 2001).

Unoccupied
A specific area is *unoccupied* by CFPO if CFPO are not currently physically present (see occupy).

Unoccupied Breeding Territory
A territory with a nest or group of alternate nests at which none of the activity patterns diagnostic of an occupied nest (defined above) were observed in a given breeding season (Postupalsky 1974).

[1] The term "occupied" is not defined in the ESA. "When terms used in a statute are undefined, 'the Court' give[s] them their ordinary meaning (Asgrow Seed Co. v. Winterboer, 513 U.S. 179,187 (1995) (Home Builders Association of Northern California v. Norton, 2003)."

EXECUTIVE SUMMARY

Proposed Action

This Habitat Conservation Plan (HCP) and Environmental Assessment (EA) have been prepared in consultation with the U.S. Fish and Wildlife Service (USFWS), Arizona Ecological Services Field Office, to fulfill the requirements for issuance of an Incidental Take Permit (ITP) under section 10(a)(1)(B) of the Endangered Species Act (ESA) for the proposed Skyranch residential development (Project) on 512 acres (Property) located in the Town of Marana, Pima County (County), Arizona (Figures 1 and 2). The Project will consist of a 103-acre residential development. Associated with the Project will be a 409-acre Reserve. A Conservation Easement (CE) will be executed concurrent with issuance of the ITP. Ninety (90) percent (368 acres) of the Reserve (409 acres) will be dedicated in the CE. The remaining ten percent (10%) of the Reserve will be dedicated in the CE upon completion of Project improvements. The term of the ITP will be five (5) years. Exeter acquired the Property in 2000 specifically for development because of its location. The Property is situated on a major intersection, it is outside the Tortolita Mountains fan sheet flooding drainage zone, and has reasonable access to utilities. The Project will consist of up to 440 production lots.

Thomas Olsen Associates, Inc. (TOA, Inc.) and Exeter LXI, L.L.C. (Exeter) have had informal discussions with the USFWS on the need for and scope of proposed mitigation for the ITP.

This EA/HCP addresses potential direct and indirect effects to the cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*) (CFPO or pygmy-owl) and its identified habitat which may result from the Project and measures proposed to avoid, minimize and mitigate, to the maximum extent practicable, those potential effects. On September 21, 2001 a Federal District Court order vacated the "Final Rule" designating Critical Habitat (CH) for the CFPO and remanded the matter back to the USFWS "for further consideration consistent with the statutory requirements of the ESA"[1]. On November 27, 2002, the USFWS proposed 1,208,001 acres in central and southern Arizona as CH for the CFPO (67 Federal Register 71031). The EA/HCP contains measures that will be implemented due to anticipated impacts to the CFPO by the Project, whether directly or indirectly. These measure are designed under the assumption that the Property will be situated within CH for the CFPO when the rulemaking is complete. The document discusses other sensitive species and habitats as identified by USFWS as being of potential concern in Pima County, AZ. The proposed Project is not expected to impact other listed or sensitive species.

Exeter requests issuance of an ITP to allow incidental take of the endangered CFPO during construction and operation of the Project.

An EA in accordance with the National Environmental Policy Act (NEPA) has been prepared as part of this document. An Implementation Agreement (IA) has been prepared as a separate document. The EA: 1) identifies the purpose and need for an ITP; 2) describes the environment that would be affected by the proposed Project; 3) discusses alternatives considered; 4) describes plans to avoid and mitigate potential impacts to CFPO habitat; and 5) identifies possible environmental consequences of the proposed Project and mitigation measures. The IA is a two-party agreement by and between the USFWS and Exeter. The IA is incorporated by reference herein.

Responsible Unit of the U.S. Fish and Wildlife Service

U.S. Fish and Wildlife Service, Arizona Ecological Services Field Office, 2321 W. Royal Palm Road.

[1] See National Association of Home Builders v. Norton, 2001 WL 1876349 (D. Ariz. Sept. 21, 2001).

Suite, 103, Phoenix, Arizona 85021-4951, (602) 242-0524.

Legal Mandate for Proposed Action

Endangered Species Act of 1973, as amended, section 10(a)(1)(B), as implemented by 50 CFR section 17.22 for endangered species, as well as 50 CFR Parts 13 and 17 regarding endangered species permits.

Figure 1 Vicinity Map

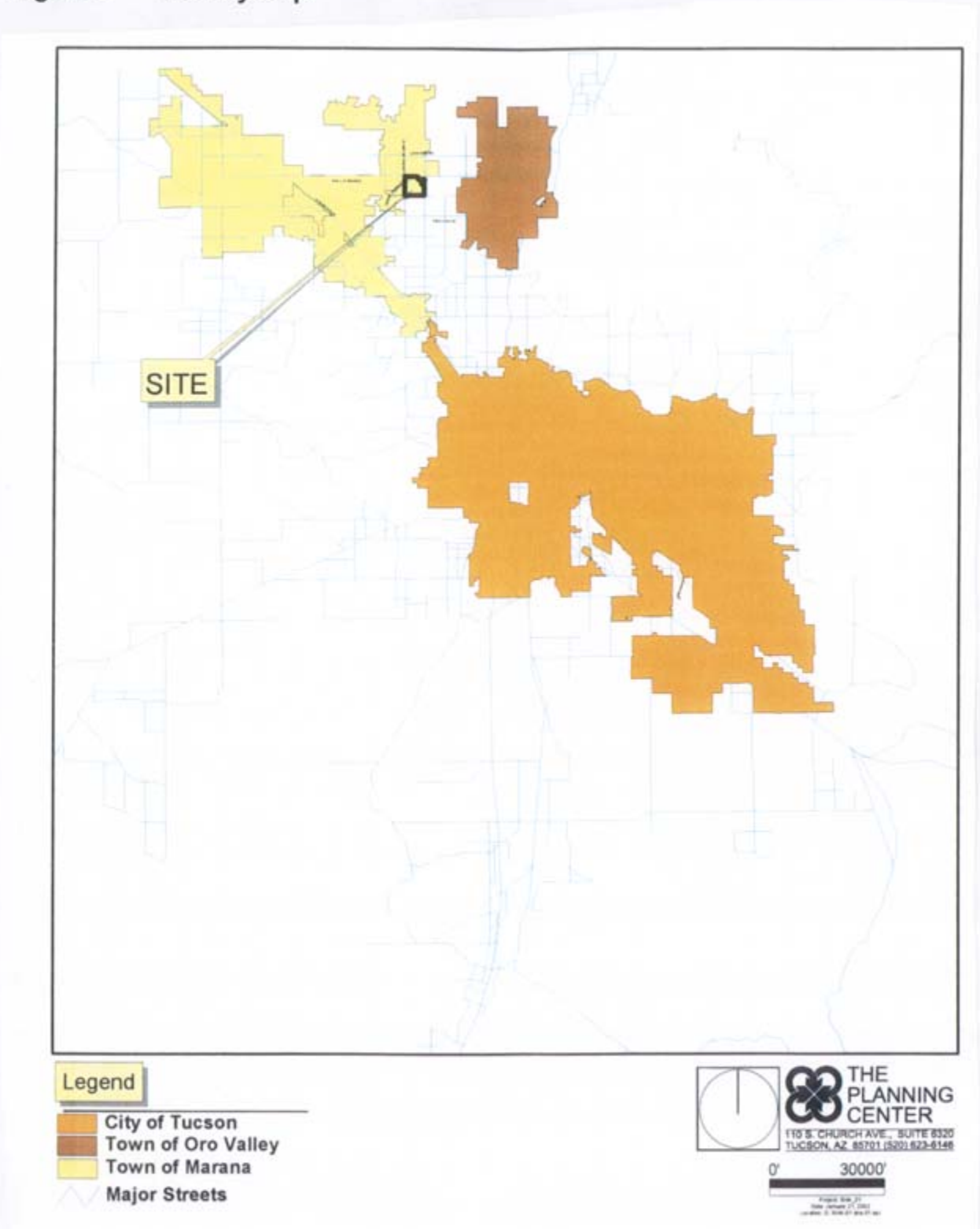
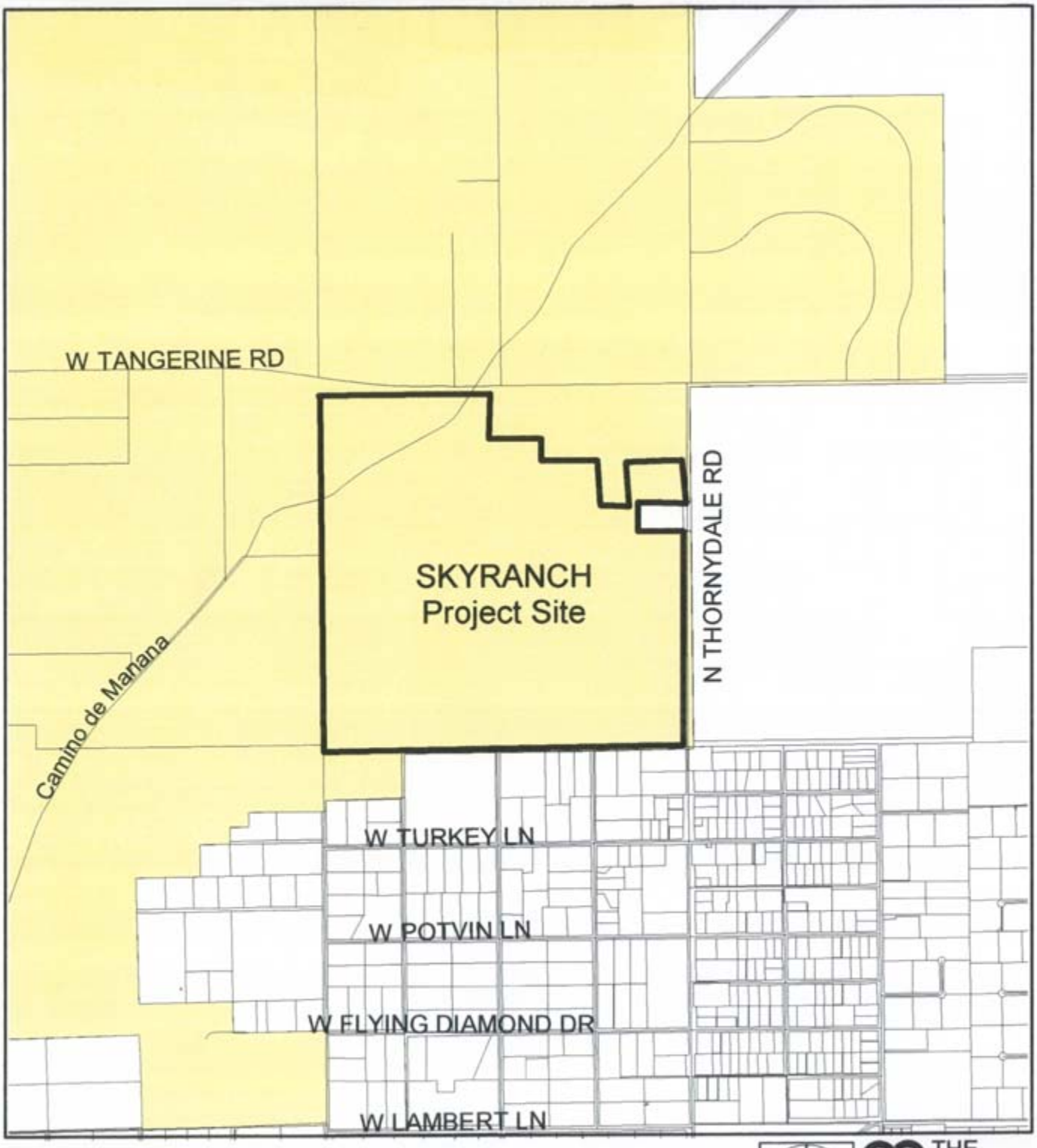


Figure 2 Location Map



20-5082 11/19/2003

Applicant

Exeter LXI, L.L.C.
5215 N. Sabino Canyon Road, Suite 100
Tucson, AZ 85750
(520) 529-6644

Document Principal Authors

Michael J. Cross and Thomas G. Olsen
Thomas Olsen Associates, Inc.
110 S. Church Avenue, Suite 6320
Tucson, AZ 85701
(520) 623-2800

Steven P. Quarles
Crowell & Moring, LLP
1001 Pennsylvania Avenue, N.W.
Washington, DC 20004-2595
(202) 624-2665

1.0 INTRODUCTION

1.1 Overview

This document provides the required compliance with the National Environmental Policy Act (NEPA) and a Habitat Conservation Plan (HCP) for a federal action to support the issuance of an Incidental Take Permit (ITP) prepared pursuant to section 10(a) of the Endangered Species Act (ESA).

The ITP is related to a proposed residential development (Project) on 512 acres (Property) located in the Town of Marana, Pima County (County), Arizona (Figures 1 and 2). The Project is owned by Exeter LXI, LLC and will consist of a 103-acre residential development. Associated with the Project will be a 409-acre Reserve. The duration of this ITP is for five years. The HCP, if approved, and ITP, if issued, are expected to provide long-term benefit to the cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*) (CFPO or pygmy-owl), a species listed as an endangered species by the U.S. Fish and Wildlife Service (USFWS) under the ESA. The HCP and ITP are designed to avoid to the maximum extent possible, but to authorize a minimum amount of, incidental take of the CFPO (subject to the terms and conditions of the two documents) within the boundaries of the Property by residents, home builders, developers, construction personnel, and maintenance personnel of the residential community. The incidental take authorized by this HCP and the ITP, if approved, is limited to non-lethal harm or harassment of up to four non-breeding CFPO that may be associated with any construction activities within 103 acres plus road and utility construction needs on the 512-acre property; this loss of 103 acres of potential habitat is due to the Project.

Section 10(a)(2)(A) of the ESA provides that no ITP may be issued by the Secretary of the Interior (Secretary) acting through the USFWS authorizing any take of a listed species, otherwise prohibited by section 9(a)(1)(B) of the ESA, unless the Applicant for the ITP submits to the Secretary a conservation plan that specifies:

1. The impact that will likely result from such take;
2. What steps the Applicant will undertake to minimize and mitigate such impacts, and the funding that will be available to implement such steps;
3. What alternative actions to such take the Applicant considered and the reasons why such alternatives are not being utilized; and
4. Such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan.

This HCP covers the Property located near the southwest corner of the intersection of Tangerine and Thornydale Roads, known as Skyranch including the Project and the CFPO Habitat Management Reserve (Reserve) (Figure 2). The Project is located within the Town of Marana, Pima County, Arizona. The Property lies entirely within the area proposed as Unit 3 of Critical Habitat (CH), and within Recovery Area 3 (RA3) and the Northwest Tucson Special Management Area (SMA) as identified in the Draft Recovery Plan for the CFPO (USFWS 2003) (Figure 3). The CFPO was listed as federally endangered on March 10, 1997 (62 Federal Register 10730). CH for the CFPO was designated on July 12, 1999 (64 Federal Register 37419). CH for the CFPO was vacated on September 21, 2001. In November 2002 the USFWS again proposed CH for the CFPO (67 Federal Register 71032). The Draft Recovery Plan was released for public review in January 2003 (68 Federal Register 1189).

On September 21, 2001 a Federal District Court order vacated the "Final Rule" designating CH for the CFPO and remanded the matter back to the USFWS "for further consideration consistent with the statutory requirements of the ESA." In November 2002, the USFWS proposed over 1.2 million acres in central and southern Arizona as CH for the pygmy-owl. "Critical Habitat" as defined by the ESA, refers to geographic areas which are essential to the conservation of the species and which may require special management consideration or protection. This EA/HCP is written with full appreciation for the basis on which the Property originally was determined to be CFPO CH. It assumes that no further special management considerations or protections would be required for the Property.

The location and limited amount of the residential areas within the Property provide potential significant benefit for future habitat conservation. It is hoped that this proposed development will become an example of land stewardship that adheres to the applicable stringent guidelines set forth by the USFWS, thereby encouraging other developments within areas that had been, and may again be designated as CH areas, to adopt similar practices. It assures that no further special management considerations or protections would be required for the Property should the final designation for CFPO CH include or implicate the Property.

TOA, Inc. was retained by Exeter to undertake focused surveys for the CFPO and prepare this EA/HCP for the Project. The Property is a 512-acre parcel under the jurisdiction of the Town of Marana, Arizona. The zoning of the site is outlined in the Skyranch Specific Plan that was approved by the Town of Marana on October 2, 2001. A copy of this Specific Plan can be found in Appendix A of this document.

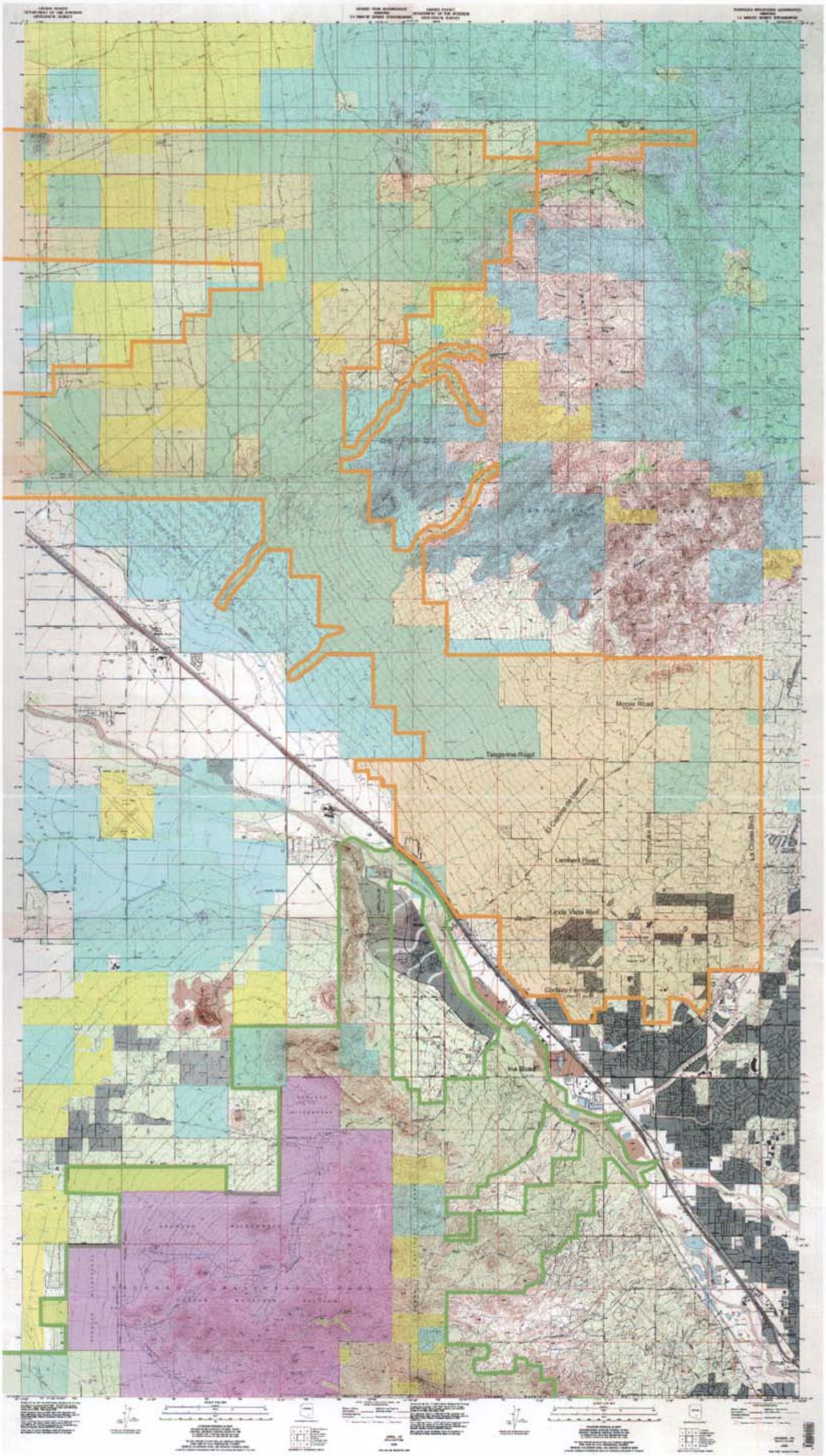
Exeter acquired the Property in 2000 specifically for development because of its location. The Property is situated on a major intersection, is outside the Tortolita Mountains fan sheet flooding drainage zone, and has reasonable access to utilities. The Project will consist of up to 440 production lots.

In order to address potential impacts to the CFPO and its identified habitat, Exeter has proposed a development that fully complies with the recommendations outlined in the USFWS CFPO Private Landowner Guidance (USFWS 2000) and the Draft Recovery Plan (USFWS 2003) (CFPO Recovery Team, pers. comm.). The development plan for the Project is described more fully in section 4.1 and is shown in Figure 6.

2.0 PURPOSE AND NEED FOR ACTION

The purpose of this EA/HCP is to evaluate and provide the basis for issuance of an ESA section 10(a)(1)(B) incidental take permit in connection with the development of the Project and operation of the Property. The EA provides an evaluation of the environmental impacts for issuance of an ITP for the Preferred Alternative, one development alternative, and the no action alternative. The ITP would authorize the potential incidental take of the cactus ferruginous pygmy-owl associated with development of the Project on, and operation of, the Property. This EA/HCP will establish the conditions under which the Applicant will meet the requirements for issuance of an ITP. The need for the ITP is so that otherwise lawful development may proceed.

Figure 3 Proposed Critical Habitat



U.S. FISH AND WILDLIFE SERVICE
CFPO CRITICAL HABITAT UNITS
PIMA COUNTY, ARIZONA

LAND STATUS LEGEND

- UNIT 3
- UNIT 2
- PUBLIC LANDS (Administered by Bureau of Land Management)
- STATE LANDS
- NATIONAL PARKS AND MONUMENTS

THOMAS OLSEN ASSOCIATES, INC.
ENVIRONMENTAL AND BIOLOGICAL CONSULTING

THE PLANNING CENTER

3.0 DESCRIPTION OF AFFECTED ENVIRONMENT

3.1 Site Location

The Property is located in the northeastern portion of the Town of Marana in Section 6, Township 12 South, Range 13 East. The site lies approximately four and one-half miles east of Interstate 10, six miles north of the Orange Grove Road/I-10 Interchange, six miles west of Oro Valley and four miles south of the Pima/Pinal County line.

Tangerine Road is the northern boundary and Camino Del Norte is the southern boundary. Thornydale Road bounds the property on the east and Camino de Oeste bounds the property on the west. Camino de Manana crosses the northwestern corner of the Property before intersecting with Tangerine Road, forming a discontiguous parcel at the Property's northwest corner.

3.1.1 Legal Description of Project Site

The Property consists of three different parcels. The legal descriptions of these parcels are as follows:

PARCEL 1: Commencing at a point on the West line of Section 6, Township 12 South, Range 13 East, Gila and Salt River Meridian, Pima County, Arizona and said point being 50.00 feet Southerly of the Northwest corner of said Section 6; Thence North 89° 50' 58" East along the Southerly line of Tangerine Road, 2,100.49 feet to a point on the Westerly right-of-way line of Camino de Manana as shown in Book 2 of Road Maps at Page 1; Thence South 32° 33' 03" West, 423.74 feet to a point of curvature; Thence Southwesterly along said curve concave to the Northwest having a central angle of 30° 39" 58", a radius of 768.15 feet and an arc length of 411.13 feet to a point of tangency; Thence South 63° 13' 01" West along said Northwesterly right-of-way line, 889.49 feet to a point of curvature; Thence Southwesterly along said curve concave to the Southeast having a central angle of 09° 17' 36", a radius of 1,689.87 feet and an arc length of 274.10 feet to a point of tangency; Thence south 53° 55' 25" West, 476.90 feet to a point of curvature; Thence Southwesterly along said curve concave to the Northwest having a central angle of 18° 21' 24", a radius of 544.94 feet and an arc length of 174.59 feet to a point on the Westerly line of said Section 6; Thence North 00° 06' 33" West along the Westerly line of Section 6 a distance of 1,527.17 feet to the point of beginning. Containing 42.412 acres of land, more or less.

PARCEL 2: Commencing at a point on the Southerly line of Section 6, Township 12 South, Range 13 East, Gila and Salt River Meridian, Pima County, Arizona and being 30.00 Westerly of the Southeast corner of said Section 6; Thence North 00° 14' 32" West along the Westerly right-of-way line of Thornydale Road, 2,638.32 feet to a point 30.00 Westerly of the East one-quarter corner of said Section 6; Thence North 00° 11' 44" West along said Westerly right-of-way line 1,319.02 feet to the Southerly line of Lot 1; Thence South 89° 52' 13" West along the Southerly line of Lot 1 a distance of 780.00 feet to a point on the Easterly line of that parcel as described in Docket 9825 at Page 1167 and Docket 9398 at Page 1375; Thence South 00° 11' 44" East along the Easterly line of said parcel, 570.00 feet to the

Southwest corner thereof; Thence South 89° 52' 13" West along the Southerly line of said parcel, 400.00 feet to the Southwest corner thereof; Thence North 00° 11' 44" West along the Westerly line thereof, 570.00 feet; Thence South 89° 52' 13" West, 2,022.82 feet; Thence North 00° 06' 46" West, 30.00 feet; Thence North 89° 52' 13" East 570.00 feet; Thence North 00° 06' 46" West, 1,016.49 feet to the Southerly right-of-way line of Tangerine Road and 50.00 feet Southerly of the Northerly line of said Section 6; Thence South 89° 50' 58" West along said right-of-way line 208.84 feet to a point on the Easterly line of Camino de Manana as shown in Book 2 of the Road Maps at Page 1; Thence South 32° 33' 03" West along the Easterly right-of-way line of said road, 462.27 feet to a point of curvature; Thence Southwesterly along said curve concave to the Northwest having a central angle of 30° 39' 58", a radius of 828.15 feet and an arc length of 443.25 feet to a point of tangency; Thence South 63° 13' 01" West, 889.49 feet to a point of curvature; Thence Southwesterly along said curve concave to the Southeast having a central angle of 09° 17' 36", a radius of 1,629.87 feet and an arc length of 264.36 feet to a point of tangency; Thence South 53° 55' 25" West, 476.90 feet to a point of curvature; Thence Southwesterly along said curve concave to the Northwest having a central angle of 20° 09' 08", a radius of 604.94 feet and an arc of length of 212.77 feet to a point on the Westerly line of said Section 6 and from which point the radius point of said curve bears North 15° 55' 27" West; Thence South 00° 06' 33" East along the Westerly line of Section 6 a distance of 681.34 feet; Thence South 00° 11' 38" East, 159.22 feet; Thence South 00° 10' 12" East, 2,483.04 feet; Thence South 00° 07' 49" East, 92.32 feet to the Southwest corner of Section 6; Thence North 89° 54' 18" East along the Southerly line of said Section 6 a distance of 2,408.05 feet to the South one-quarter corner of Section 6; Thence North 89° 46' 40" East 2,610.69 feet to the point of beginning containing 461.44 acres of land, more or less.

PARCEL 3: Commencing at the East one-quarter corner of Section 6, Township 12 South, Range 13 East, Gila and Salt River Meridian, Pima County, Arizona; Thence South 89° 07' 10" West along the Southerly line of the Northeast one-quarter of Section 6 a distance of 30.00 feet to a point on the Westerly right-of-way line of Thornydale Road; Thence North 00° 11' 44" West along said Westerly right-of-way line, 1,319.02 feet to the Southerly line of Lot 1; Thence South 89° 52' 13" West along the Southerly line of Lots 1 and 2 a distance of 1,942.82 feet; Thence North 00° 06' 46" West, 30.00 feet to the true point of beginning; Thence continuing North 00° 06' 46" West, 370.00 feet; Thence South 89° 52' 13" West, 630.00 feet; Thence South 00° 06' 46" East, 370.00 feet; Thence North 89° 52' 13" East, 630.00 feet to the true point of beginning, containing 5.351 acres of land, more or less.

3.2 Environmental Setting

The Property is an approximately 512-acre, undeveloped site located in the Town of Marana, at the southwest corner of Tangerine and Thornydale Roads. The Property is located within Unit 3 of proposed CH for the CFPO.

The Property is at an elevation of 2540 to 2660 feet on the southern bajada of the Tortolita Mountains and slopes gently to the southwest. The bajada is structured as alluvial fans comprised of parent material from the Tortolita Mountains. There is no exposed bedrock on the Property. The soils are predominantly sandy loams, gravels, caliche and rocks smaller

than six inches. Drainage bottoms are composed of clean, large grain sands. Several drainage ways bisect the Property, creating an undulating topography. The washes originate in the northeast and flow toward the southwest.

3.2.1 Vegetation

The vegetation community on the Property is of the Palo Verde-Cacti-Mixed Scrub Series of the Arizona Upland Subdivision of the Sonoran Desert (Brown 1994). This vegetative community is best represented on bajadas and mountainsides away from valley floors. A list of plant species found on the property is provided in section 3.5 of this document. Dominant plant species on-site include foothill palo verde (*Cercidium microphyllum*), saguaro cactus (*Cereus giganteus*), velvet mesquite (*Prosopis velutina*), ironwood (*Olneya tesota*), triangle leaf bursage (*Ambrosia deltoidea*), creosote bush (*Larrea tridentata*), and several species of cholla cacti (*Opuntia spp*).

Two general habitat types are represented on the Property and are described on the following pages. A schematic map of habitat types is provided in Figure 5.

3.2.1.1 Xeroriparian Habitat

Xeroriparian habitat on the Property totals 129.57 acres. Vegetative cover in the washes that contain this habitat type is of a higher density than that found in the uplands. Species composition is similar to that of the adjacent uplands on site. The plants living along the washes are larger and more densely distributed as is typical in xeroriparian environments. Canopy trees along these washes are typically larger than those of the upland areas. The canopy species observed along these washes include ironwood, palo verde, velvet mesquite, and acacia (*Acacia spp.*). The canopy closure and plant density of these areas are much higher than those found in the uplands. The largest wash system of this type crosses the Property diagonally from the northeast to the southwest corners.

3.2.1.2 Arizona Upland Habitat

The Upland Palo Verde-Cacti-Mixed Scrub habitat on the Property totals 381.02 acres. Vegetative cover is of a lower density than that found in the xeroriparian areas. Species present in this habitat include saguaro cactus, prickly pear cactus (*Opuntia englemannii*), fish hook barrel cactus (*Ferocactus wizlizenii*), cholla, triangle leaf bursage, palo verde, ironwood, velvet mesquite, and acacia. This habitat type occurs in the interstitial spaces between the wash courses that transect the Property.

3.3 Wildlife

In general, wildlife on the Property is typical of that found in the Arizona Upland Subdivision of the Sonoran desertscrub biotic community with similar habitats. As with other vegetation communities in the southwestern United States, habitat values for breeding territorial bird species on the Property are expected to be positively correlated with the amount of vegetation (vegetation volume) (Mills et al. 1986). Of the habitat types identified on the Property (xeroriparian, upland), wildlife habitat values are expected to be highest in the

xeroriparian habitat and lowest in the upland habitat. Common reptile and amphibian species observed or expected to occur on the subject parcel include diamondback rattlesnake (*Crotalus atrox*), gopher snake (*Pituophis melanoleucus*), tree lizard (*Urosaurus ornatus*), Gila monster (*Heloderma suspectum*), Couch's spadefoot toad (*Scaphiopus couchii*), and red-spotted toad (*Bufo punctatus*). Common bird species expected to occur include northern mockingbird (*Mimus polyglottos*), Gambel's quail (*Callipepla gambelii*), ash-throated flycatcher (*Myiarchus cinerascens*), cactus wren (*Campylorhynchus brunneicapillus*), black-throated sparrow (*Amphispiza bilineata*), Gila woodpecker (*Melanerpes uropygialis*), and verdin (*Auriparus flaviceps*). Common mammals expected to occur on the Property include desert cactus mouse (*Peromyscus eremicus*), desert cottontail (*Sylvilagus audubonii*), desert mule deer (*Odocoileus hemionus crooki*), javelina (*Tayassu tajacu*), and coyote (*Canis latrans*).

Listed, Proposed, Candidate, and Other Rare Species

The USFWS has identified in Pima County twenty species as threatened species or endangered species (T&E species) under section 4 of the ESA, one proposed for listing, and three as candidate species. Two additional species are covered by a Conservation Agreement (USFWS 2003). After reviewing the literature, TOA, Inc. determined that only the CFPO and the lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*) might occur on or near the Property. For the purposes of this HCP, only potential effects to these two species will be discussed. The USFWS list of T&E species in Pima County is provided in Appendix D.

In addition to T&E species, Pima County has identified fifty-six special status species for consideration in the Sonoran Desert Multiple Species Habitat Conservation Plan (SDMSHCP). The SDMSHCP is being prepared and is expected to be finished within the next few years. This multi-species habitat conservation effort was initiated by Pima County under section 10(a) of the ESA. After reviewing available information on these species, five have been identified as having the potential to occur on or near the Property. These species are: the gilded flicker (*Colaptes auratus; C. crysoides*), Abert's towhee (*Pipilo aberti*), Gila monster, desert tortoise (*Gopherus agassizzii*), and Tumamoc globeberry (*Tumamoca macdougalii*).

3.3.1 Cactus Ferruginous Pygmy-Owl

The CFPO is a small non-migratory neo-tropical owl found from Argentina to southern Arizona and Texas in the United States. The northernmost subspecies, the CFPO, though described as common in Arizona early in this century, has declined since 1900 (Millsap and Johnson 1988). The best information available suggests that the Arizona population began to decline in the 1920s and by the 1950s was rare (Johnson, Glinski, Carothers and Kingsley 1999, unpublished manuscript). The Arizona Game and Fish Department (AGFD) classifies the CFPO as a species of special concern (AGFD Wildlife of Special Concern in Arizona). The USFWS listed the pygmy-owl as an endangered species in Arizona in 1997.

In the Tucson area, the CFPO has historically been associated with Sonoran riparian deciduous woodlands, xeroriparian washes, and dense Sonoran desertscrub (USFWS 2003). Survey efforts since 1993 have resulted in more recent sightings, many of which have been in northwest Tucson.

Ongoing surveys and monitoring conducted by AGFD, USFWS, and private consultants during the 2000-breeding season identified thirty adult CFPO and nine juvenile CFPOs statewide (S. Richardson, AGFD, pers. comm. August 16, 2000). Approximately one half of the documented CFPOs reside in Sonoran desertscrub in

northwest Tucson and adjacent Pinal County. CFPOs also inhabit Organ Pipe National Monument and Altar Valley. In 2000, there were twenty-two confirmed territories and six active nest sites in Arizona. At the time of this writing, large areas of potential CFPO habitat in Arizona have not been surveyed.

The CFPO is known to exist in the state of Sonora, Mexico. Sonora is located across the international border from Arizona and is adjacent to habitat currently occupied by the CFPO in the Altar Valley, Organ Pipe Cactus National Monument, and the Tohono O'odham Nation. Historical records indicate CFPO occurrence in areas throughout Sonora (Flesch & Steidl 2000). Prior to 2000, the CFPO was thought to be rare in northern Sonora, with only five verifiable records of occurrence north of 30° N Latitude between 1925 and 2000. In 2000 the University of Arizona conducted surveys for CFPO throughout Sonora. A total of 240 CFPO were detected during this effort, which indicates that CFPO occur in Sonora in higher numbers than previously thought. CFPO were documented throughout Sonora and high densities of CFPO were found in Arizona Upland habitat in the northern part of Sonora immediately adjacent to the international boundary (Flesch & Steidl 2000).

Little is known about the habitat needs of CFPO in Arizona (Wilcox et al. 1999). In Arizona CFPO have been known to occur in river bottom woodlands, woody thickets, Sonoran desertscrub, and semi-desert grasslands. The highest reported densities of CFPO are in the northwest Tucson/southern Pinal County area and the Altar Valley (M. Wrigley, USFWS, pers. comm. June 1999). Some members of the Altar Valley population occupy habitat different from habitat of other known pygmy-owl populations in Arizona. Some members of this population occupy linear riparian and xeroriparian corridors in desert grasslands. They are found in pockets of mesquite, hackberry, and ash along the drainages. Saguaros are very rare or absent in this area. About half of the Altar Valley CFPOs occupy territories in a belt of Sonoran desertscrub habitat found at an elevation of 3000-4000 feet (Dr. M. Ingraldi, AGFD, pers. comm. February 23, 2000). This area has the only significant concentrations of saguaro cacti in the Altar Valley. Other pygmy-owls in this population occupy transitional habitats between mesquite grassland and Sonoran desertscrub. The common element among the different habitats occupied by the pygmy-owls is dense vegetation and structural diversity with nearby trees and/or saguaros of sufficient size to contain nest cavities (USFWS 1999). CFPO nest sites in Arizona may be loosely associated with water, but the relationship is not definitive as some nests have been located in areas devoid of water (Dr. M. Ingraldi, AGFD, pers. comm. February 23, 2000). One study found that nest sites in northwest Tucson were located from three to thirty-five meters from the nearest water source (Wilcox et al. 1999). Another study conducted in south Texas indicates that when given the opportunity to select, CFPO seem to prefer to nest in close proximity to water (Glen Proudfoot, pers. comm. June 18, 2002). It may be that CFPO take advantage of water and the associated benefits it provides when available, but its presence may not be necessary for successful nesting. It is possible that this preference is directly related to increased vegetation densities and prey availability associated with water sources such as washes and irrigation.

The best available information suggests that CFPO in northwest Tucson tolerate, and perhaps select, partially developed environments provided sufficient high quality green-space remains for foraging and dispersal. Successful CFPO nest sites are located in areas with land disturbance ranging from 16% to 54% (mean=33%) (AGFD, unpublished data). CFPO nest sites are known to occur in proximity (200 m) to high-density housing developments (M. Cross, personal observation). In 2001,

66% of all known CFPO production in northwest Tucson occurred within 200-400 meters of high-density developments with site disturbance ratios within the territories in excess of 36% (AGFD, unpublished data) (M. Cross, personal observation). Although none of the adjacent high-density housing developments is utilized by CFPOs, the presence of these developments does not seem to preclude CFPOs from successfully breeding in the adjacent suitable habitat. Partially developed environments may provide elements, such as the presence of water, thick vegetation, and abundant prey that mimic or replace riparian habitats, which have been seriously degraded in much of the CFPO's documented former range in Arizona since the turn of the century. All known CFPO nest sites in northwest Tucson are associated with some level of human development (Dr. M. Ingraldi, AGFD, pers. comm. 2002).

Unlike most owls, the CFPO is primarily crepuscular and/or diurnal and can often be heard calling throughout the daylight hours. These calls are most often uttered at dawn and dusk (G. Frederick, pers. comm. 1996). Calling activity is most common from late January though early June, with the peak calling period occurring between mid-February to mid-March (USFWS 1999). Some calling activity has been observed in the fall during the months of September and October. Young of the year tend to respond more often in fall than territorial adults. AGFD researchers have found that pygmy-owl response rates during surveys drop off from mid-November to January. Spontaneous calling also appears to be more limited at this time. There is variation between individuals, and CFPO hatched in a given year tend to call more frequently during the post breeding period.

In 2001, in Arizona, there were 37 reported confirmed (according to AGFD guidelines)[1] adult CFPO statewide (Scott Richardson, AGFD, pers. comm.). There were 13 confirmed nests for 2001. The eggs in one nest did not hatch (four eggs). Another nest appeared to fail at the nestling/fledging stage. Four nestlings had been observed in the nest. The nest was difficult to monitor due to the degraded nature of the saguaro and its remote location so AGFD cannot be sure what happened, but no young were found in the nest nor the vicinity at the time fledging should have occurred. The remaining eleven nests had the following productivity: 31 young or eggs observed (one nest was not able to be monitored so AGFD is not sure how many eggs or young were present in the nest), 24 young were confirmed to have fledged (fledging occurred without documentation at two nests, this is potentially nine more fledglings AGFD was not able to document). Twenty young were banded and eleven were fitted with radio-transmitters. Table 1 depicts the total numbers of CFPO reported by AGFD from 1993 to 2002.

CH for the CFPO was proposed in November 2002. A total of 488,863 hectares (1,208,001 acres) of riverine and upland habitat in Pima and Pinal Counties were proposed for designation. The Property is located in proposed CH Unit 3, which covers 73,958 acres in northwest Tucson and southern Pinal County.

CH is defined in section 3 of the ESA as the specific areas within the geographic range occupied by species at the time it is listed on which are found features: (I) essential to the conservation of the species; (2) that may require special management consideration or protection; and (3) specific areas outside the geographic range occupied by the species at the time of its listing when these areas are determined essential for the conservation of the species.

[1] These numbers do not include CFPO that are known to occupy the Tohono O'odham Nation.

In accordance with section 3(5)(A)(i) of the ESA and regulations at 50 CFR 424.12, in determining which areas to propose as CH, the USFWS is to consider those physical and biological features that are determined to be essential to conservation of the species. These include, but are not limited to the following:

> Space for individual population growth and normal behavior;
>
> Food, water, air, light, minerals, or other nutritional or physiological requirements;
>
> Cover and shelter;
>
> Sites for breeding, reproduction, or rearing of young, germination, or seed dispersal; and
>
> Habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of the species.

CH designated in 1999 for the CFPO was vacated on September 21, 2001. The USFWS re-proposed CH in November 2002 (USFWS 2002). This HCP addresses the basis on which the Property originally was formerly designated and is currently proposed as CH.

The USFWS has divided currently proposed CH into five units. The proposed Project is located within the northeast portion of Unit 3 (Figure 3 Proposed Critical Habitat). The five units were set up to provide a contiguous band of habitat linking currently occupied and historical CFPO habitats from the Mexican border northward in Arizona.

The primary constituent elements determined necessary for survival and recovery of the pygmy-owl (67 Federal Register 71038) include: 1) elevations below 1,200 m (4,000 ft.) within the biotic communities of Sonoran riparian deciduous woodlands; Sonoran riparian scrubland; mesquite bosques; xeroriparian communities; tree-lined drainages in semidesert, Sonoran savanna, and mesquite grasslands; and the Arizona Upland and Lower Colorado River subdivisions of Sonoran desertscrub (see Brown 1994 for a description of vegetation communities); 2) nesting cavities located in trees including, but not limited to cottonwood, willow, ash, mesquite, palo verde, ironwood, and hackberry with a trunk diameter of 15 cm (6 in) or greater measured 1.4 m (4.5 ft.) from the ground, or large columnar cactus such as saguaro or organ pipe greater than 2.4 m (8 ft.); 3) multilayered vegetation (presence of canopy, mid-story, and ground cover) provided by trees and cacti in association with shrubs such as acacia, prickly pear, desert hackberry, graythorn, etc., and ground cover such as triangle-leaf bursage, burro weed, grasses, or annual plants; 4) vegetation providing mid-story and canopy level cover (this is provided primarily by trees greater than 2 m (6 ft.) in height) in a configuration and density compatible with pygmy-owl flight and dispersal behaviors; and 5) habitat elements configured and human activity levels minimized so that unimpeded use, based on pygmy-owl behavioral patterns (typical flight distances, activity level tolerance, etc.), can occur during dispersal and within home ranges (the total area used on an annual basis).

TABLE 1

ARIZONA GAME AND FISH DEPARTMENT
CACTUS FERRUGINOUS PYGMY-OWL DEMOGRAPHICS 1993-2002
FOR PIMA AND PINAL COUNTIES, ARIZONA
(Unpublished Data)

NOTE: Data from sites investigated by Arizona Game and Fish and associates only. Detections by consultants or USFWS records not confirmed by AGFD are not included. Also excluded are CFPO that are known to occupy the Tohono O'odham Nation.

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002*	Mean
Total Adults Detected	1	3	6	11	5	11	37	30	38	29	14.4
Total Unpaired Males	0	0	1	7	1	3	7	10	9	12	5.0
Total Unpaired Females	0	0	0	0	0	0	1	1	1	4	0.7
Total Unpaired Unknown Sex	0	0	1	0	0	0	0	1	0	0	0.2
Total Undetermined Status	1	1	2	0	1	0	7	2	2	2	1.8
Total Active Nests	0	0	1	1	1	4	11	6	13	3	4.0
Total Successful Nests	_	_	1	1	1	4	10	5	10	3**	3.5
Total Failed Nests	_	_	0	0	0	0	0	1	2	0	0.3
Total Nests Outcome Unknown	_	_	0	0	0	0	1	0	1	0	0.2
Total Pre-Dispersal Occupied Sites	1	2	5	9	3	7	26	22	23	24	12.2
Total Post-Dispersal Occupied Sites	1	2	5	9	5	11	30	26	29	23	14.1
Total Fledglings**	_	_	1	2	4	16	32	20	27	9	11.1
Total CFPO-Adult & Fledgling	1	3	7	13	9	27	69	50	65	38	28.2
Fledglings per Active Nest	_	_	1.00	2.00	4.00	2.90	2.90	3.33	2.08	3.00	2.77
Fledglings per Successful Nest	_	_	1.00	2.00	4.00	3.20	3.20	4.00	2.70	3.00	3.17

Total Known Fledglings for all years – 111

* 2002 data collection still in progress and may be revised.

** Though considered successful, all fledglings from 2 nests did not survive after 8 days post-fledge.

*** The number of fledglings is from nest sites where outcome was known. Nestlings at 21 days or older were considered fledglings and these nests were documented as successful.

Means are simple arithmetic means.

3.3.2 Site Specific CFPO Occupancy Status

In 2000, the AGFD and the USFWS informed TOA, Inc. and Exeter that portions of three known territories of individual pygmy-owls occur within or adjacent to the Property. The portions of the three CFPO territories that extend into the Property total 76.6 acres, approximately 15% of the Property. In September 2000, a dispersing juvenile briefly occupied a portion of the Property. This individual CFPO was outfitted with a radio transmitter as part of an ongoing AGFD study and set up an activity center in the northeast portion of the site. On November 3, 2000, Scott Richardson of AGFD contacted TOA, Inc. with information regarding the radio telemetered juvenile pygmy-owl that had been using a portion of the Property. An aerial telemetry survey had located an odd stationary signal from the transmitter emanating from an area just south of the Tucson Metro Water District easement on the Property. Signals of this nature can indicate that the CFPO has died or shed its transmitter.

An AGFD biologist visited the Property with TOA, Inc. personnel at 12:30 p.m. on November 8, 2000. The telemetry signal was followed to a small ironwood tree south of the Tucson Metro Water District easement and west of Thornydale Road. The transmitter was located on the ground below the tree in association with a pack rat nest (*Neotoma spp.*) Damage to the unit indicated that the CFPO might have succeeded in removing the transmitter. The antenna had a number of nicks consistent with a pygmy-owl pulling at the wire. The forward backpack harness had been frayed and severed on one side while the rear harness was intact. If a raptor or mammalian predator had predated the pygmy-owl, it would be likely that the transmitter would be in much worse condition. In addition, no feathers or other CFPO remains were found with the transmitter.

The transmitter's location in association with a pack rat nest makes it impossible to determine exactly where or how the unit was lost. Pack rats routinely collect items throughout their home range and transport them some distance to the nest. This indicates that the CFPO may have shed its transmitter, or less likely, been predated upon some distance from the location where it was found. The ground surrounding the area was searched for evidence that could provide clues to the fate of the pygmy-owl. Special attention was paid to areas below large trees and cacti containing likely raptor feeding perches. No further evidence was found. AGFD's recommendation was that the area be considered occupied until focused surveys indicate that the CFPO is no longer present.

An additional CFPO dispersed across the property in 2000. The pygmy-owl was documented on the Project's southern boundary for one day prior to the transmitter going dead. This individual CFPO subsequently established a territory outside of the Property.

Surveys conducted on the Property in 2001 resulted in four unconfirmed[2] detections on or immediately adjacent to the Property (see section 3.3.3 below). In August of 2001, a juvenile CFPO dispersed across the northern edge of the Property. At the time of this writing, two of the three documented CFPO territories that occur on the Property have become vacant. The status of the third territory is unknown and is presumed vacant. The current status of the activity center temporarily established by the dispersing juvenile in 2000 is also unknown and presumed vacant. Surveys

[2] A detection is confirmed when a) a pygmy-owl is seen, b) calling is vigorous and more than 10 notes, c) a second observer is able to confirm the detection.

conducted in 2002 resulted in one unconfirmed CFPO detection in the vicinity of this activity center.

3.3.3 Site Specific Survey Efforts

TOA, Inc. surveyed the Property to determine presence/absence of the CFPO in 2000. The surveys resulted in three separate detections of at least three CFPOs (Thomas Olsen Associates, Inc. 2000).

Survey protocol (methodology) developed by the USFWS and AGFD in January 2000 was adopted for this effort. The portion of the Property not known to be occupied by CFPOs, approximately 443 acres, was surveyed three times during the spring 2000 survey period.

Surveys for the CFPO were repeated during the 2001 survey season. One CFPO was detected on the Property during the first round of surveys on January 17, 2001. This detection occurred near the area in which a pygmy-owl was detected in 2000. There were three more CFPO detections on or adjacent to the northeast corner of the Property on March 28, April 4, and April 5, 2001. All of these detections were unconfirmed (Thomas Olsen Associates, Inc. 2001).

Surveys conducted in 2002 resulted in one unconfirmed CFPO detection on June 22. This detection occurred on the Property boundary in the vicinity of the activity center established by a dispersing juvenile CFPO in 2000. The detection occurred over 300 meters away from the planned Project (Thomas Olsen Associates, Inc. 2002). It is possible that this portion of the site is currently occupied by a pygmy-owl. However, AGFD researchers who visited the detection site do not believe that there is an active CFPO nest site in the vicinity.

Surveys in 2003 failed to detect any individual CFPO (Thomas Olsen Associates, Inc. 2003).

3.3.4 Lesser Long-Nosed Bat

The lesser long-nosed bat is a leaf-nosed bat characterized by an elongate muzzle, small leaf nose, and long tongue. Coloration is yellowish brown or gray above and cinnamon below. The tail is minute and appears to be lacking.

The lesser long-nosed bat (bat) is listed as an endangered species by the USFWS (53 Federal Register 38456). The AGFD lists it as a species of special concern (AGFD in prep). The species habitat in Arizona includes areas below 6000 feet elevation in Cochise, Pima, Maricopa, Pinal, Graham, and Santa Cruz Counties. In Arizona the species is migratory. Pregnant females arrive in late April and early May and occupy maternity roosts located in caves and abandoned mines. At night they disperse to feed upon nectar and pollen of saguaros and other columnar cacti (Wilson 1985). In late July and early August the adult males arrive to join the females and young as they disperse to forage upon the nectar and pollen of agave flowers. This dispersal extends farther east and north into plant communities occurring at elevations higher than those used earlier in the season (Cockrum and Petryszyn 1991). By late September, the majority of the bats have left Arizona and returned to their winter range in Mexico. The closest known roost site is located approximately forty-five miles away from the Property.

There are no known records of this species' occurrence on or near the Property. Hoffmeister (1986) reports a record of the lesser long-nosed bat from approximately fifteen miles northeast of the Property. There are no known suitable roost sites on or near Property.

The lesser long-nosed bat is known to fly 80-100 kilometers a night while foraging (USFWS 1995). Based on numerous studies documenting long distance commutes between day roost sites and foraging areas, Flemming concluded in the recovery plan for the species, prepared in 1997, that the bats forage over long distances. For this reason it is possible that lesser long-nosed bats may occasionally use the Property for foraging or dispersal.

3.3.5 Pima County Special Status Species

3.3.5.1 Desert Tortoise

The desert tortoise (tortoise) is an herbivorous reptile inhabiting much of Arizona's southwestern Sonoran desert. The tortoises are known to occur in patches of the Tortolita Mountains north of the Property (Chris Klug, AGFD, pers. comm. September 15, 1999). The Arizona population of desert tortoise prefers rocky foothills where they find shelter in caves or burrows created under rocks and boulders. They are much less common in lower bajadas and desert grasslands. This species spends most of its life in burrows that provide constant protection against temperature extremes. In winter the tortoises hibernate singly or in communal dens. They emerge from hibernation in early spring when they are active primarily in mid-day. Tortoises in Arizona generally aestivate during the hot, dry period proceeding the summer monsoon season. With the onset of the monsoon, the tortoises re-emerge and peak activity occurs at this time. During this season they are active primarily at dawn and dusk.

Neither the species nor its sign has been observed on or immediately adjacent to the Property. The Property is approximately one and one-half miles from the Tortolita Mountains where the species is known to occur in the rocky habitat. Very little is known about the species' long-range dispersal. The Property lacks the constituent elements of preferred desert tortoise habitat; thus the likelihood of its occurrence on the Property or the Project site is minimal.

3.3.5.2 Gilded Flicker

The gilded flicker has been identified by Pima County as a special status species. This species is one of three races of the northern flicker. The gilded flicker interbreeds with the red shafted and yellow-shafted races where the ranges overlap (The National Geographic Society 1987). These large, active birds inhabit cavities in saguaros and trees and have been observed by TOA, Inc. personnel on the Property.

3.3.5.3 Abert's Towhee

The Abert's towhee has been identified by Pima County as a special status species. This bird is common within its range but is shy and secretive. It inhabits desert woodlands, streamside thickets, and suburban yards and orchards (The National Geographic Society 1987), and has been observed by TOA, Inc. personnel on the Property.

3.3.5.4 Gila Monster

The Gila monster is a large, heavy-bodied lizard that occupies the Sonoran desert and semi-desert grassland areas of southern Arizona. (Stebbins 1985). Its range and habitat preference largely coincides with that of the desert tortoise (Chris Klug, pers. comm. September 15, 1999). The Gila monster finds shelter in burrows it digs by itself or those of other small animals. It may also occupy woodrat nests or crevices under rocks. This animal is diurnal and feeds upon small mammals, invertebrates, reptiles, carrion, and the eggs of ground nesting birds. It responds to seasonal climate changes in much the same way as the desert tortoise. The Gila monster hibernates in winter and emerges as the temperature rises in the spring, followed by aestivation during the hot, dry months preceding the monsoon, and reemergence and peak activity during the summer rains.

TOA, Inc. personnel have not observed this species on the Property. The species would be expected to be most numerous in the same types of habitat occupied by the desert tortoise. It is possible that Gila monsters may occur on the Property.

3.3.5.5 Tumamoc Globeberry

The Tumamoc globeberry was originally listed by USFWS as an endangered species in 1986 (51 Federal Register 15906). At the time of its listing there were only thirty isolated populations known in Pima County and five in Sonora, Mexico. Increased surveys conducted after its listing resulted in the identification of additional populations. The USFWS de-listed the species in 1993 (58 Federal Register 33562).

The Tumamoc globeberry is a perennial vine in the rattle gourd family. Plants are found under nurse trees or shrubs that provide structural support for the vines. The stems arise from a large tuber-like root. This species occupies a variety of desert habitats below 3000 feet elevation. Much of its habitat is remote desert and therefore unlikely to be threatened in the foreseeable future. No Tumamoc globeberry has been recorded on the Property.

3.4 Jurisdictional Waters of the United States

In 2000 a delineation of Jurisdictional Waters of the United States was conducted on the Property. Drainages of sufficient size to be considered jurisdictional by the U.S. Army Corps of Engineers (Corps) were identified prior to field delineation. Data on width of ordinary high water, upland and xeroriparian vegetation were collected on site. Each of the drainages identified as potentially jurisdictional was visited.

Nine drainages on the Property were identified as Jurisdictional Waters of the United States. The Wetland Delineation Report subsequently determined that these washes are within the jurisdictional limits of section 404 of the Clean Water Act (CWA). This report has been forwarded to the Corps and is currently under review (Figure 4).

3.5 Property Species List

The following list represents individuals observed on the Property incidental to CFPO surveys.

PLANTS

Blue palo verde *(Cercidium floridum)*
Canyon ragweed *(Ambrosia ambrusiodes)*
Catclaw acacia *(Acacia greggi)*
Cholla (spp.) *(Opuntia spp.)*
Creosote *(Larrea tridentate)*
Desert broom *(Baccharis sorothroides)*
Desert Christmas cactus *(Opuntia leptocaulis)*
Engleman hedgehog cactus *(Echinocereus euglemannii)*
Ephedra *(Ephedra spp.)*
Fish hook barrel cactus *(Ferocactus wizlizenii)*
Foothill palo verde *(Cercidium microphyllum)*
Graythorn *(Ziziphus obtusifolia)*
Ironwood *(Olneya tesota)*
Ocotillo *(Fouquiria splendens)*
Prickly pear cactus *(Opuntia englemannii)*
Saguaro cactus *(Cereus giganteus)*
Thornbush *(Lycium spp.)*
Triangle leaf bursage *(Ambrosia deltoidea)*
Turpentine bush *(Ericamoria laricifolia)*
Velvet mesquite *(Prosopis velutina)*
Whitethorn acacia *(Acacia constricta)*

MAMMALS

Antelope ground squirrel *(Ammospermophilus harrisii)*
Black tailed jackrabbit *(Lepus californicus)*
Coyote *(Canis latrans)*
Desert cottontail *(Sylvilagus audubonii)*
Desert mule deer *(Odocoileus hemionus crooki)*
Javalina *(Tayassu tajacu)*
Woodrat *(Neotoma spp.)*

BIRDS

Abert's towhee *(Pipilo aberti)*
American goldfinch *(Carduelis tristis)*
Black-chinned sparrow *(Spizella atrogularis)*
Black-tailed gnatcatcher *(Polioptila melanura)*
Black-throated sparrow *(Amphispiza bilineata)*
Bronzed cowbird *(Molothrus aeneus)*
Cactus wren *(Campylorrhynchus brunneicapillus)*
Common raven *(Corvus corax)*
Coopers hawk *(Accipiter cooperii)*
Curve-billed thrasher *(Toxostoma curvirostre)*
Gambel's quail *(Callipepla gambelii)*
Gila woodpecker *(Melanerpes uropygialis)*
Great-horned owl *(Bubo virginianus)*
Horned lark *(Eremophila alpestris)*
House finch *(Carpodacus mexicanus)*
House wren *(Troglodytes aedon)*
Ladder-backed woodpecker *(Picoides scalaris)*
Lesser nighthawk *(Chordeiles acutipennis)*
Mourning dove *(Zenaida macroura)*
Northern cardinal *(Cardinalis cardinalis)*
Northern (Gilded) flicker *(Coloptes auratus)*
Northern harrier *(Circus cyaneus)*
Northern mockingbird *(Mimus polyglottos)*
Phainopepla *(Phainopepla nitens)*
Pyrrhuloxia *(Cardinalis sinuatus)*
Red-tailed hawk *(Buteo jamaicensis)*
Road runner *(Geococcyx californianus)*
Short-eared owl *(Asio flammeus)*
Turkey vulture *(Cathartes aura)*
White-winged dove *(Zenaida asiatica)*
Wilson's warbler *(Wilsonia pusilla)*

3.6 Geology and Soils

The Property is located on the southern bajada on the Tortolita Mountains, and lies within the Basin and Range physiographic province. This physiographic province is characterized by numerous small mountain ranges that arise from broad, plain-like valleys or basins. The southern side of the Tortolita Mountains is composed of older surficial deposits (middle Pleistocene to latest Pliocene), alluvium with less abundant broken rock and wind-formed deposits. Alluvial deposits of andesite and rhyolite fragments from the bedrock of the adjacent mountains (Chronic 1983) characterize the northwest Tucson area. Soils on the Property are predominately sandy loams, caliche, gravels and rocks smaller than six inches. Several drainages bisect the Property, following from northeast to southwest creating an undulating topography. Elevations within the Property range from approximately 2540 feet above mean sea level (amsl) along the eastern border to approximately 2660 feet amsl on the western border.

3.7 Land Use

The Property is presently vacant open space. A limited amount of pedestrian and equestrian recreational use occurs on the Property. Low-density residential development occurs to the south and west of the Property. Undeveloped state trust lands are located to the east of the Property. Undeveloped private land and low-density housing occur to the north of the Property.

3.8 Water Resources

There are presently no water resources on the property and there are no wells within 100 feet of the Property. Municipal water is available by connecting to Tucson Water mains on Thornydale Road or on Naranja Drive.

3.9 Air Quality

Air quality on the Property is typical for this portion of the Tucson basin. The Property is located in an area that the Pima County Department of Air Quality has classified as the Rillito non-attainment area for PM^{10} (Pima County Ordinance 1993-128 § 2, 1993). In addition, the Property is located within a Class II attainment area for SO_2, NO_2, and O_3, and in an unclassified area for CO (R. Gramaldi, PCDEQ, pers. comm.).

3.10 Water Quality

Water available to the Property is municipal water supplied by Tucson Water. The quality of this water is in accordance with standards set by the Environmental Protection Agency.

3.11 Cultural Resources

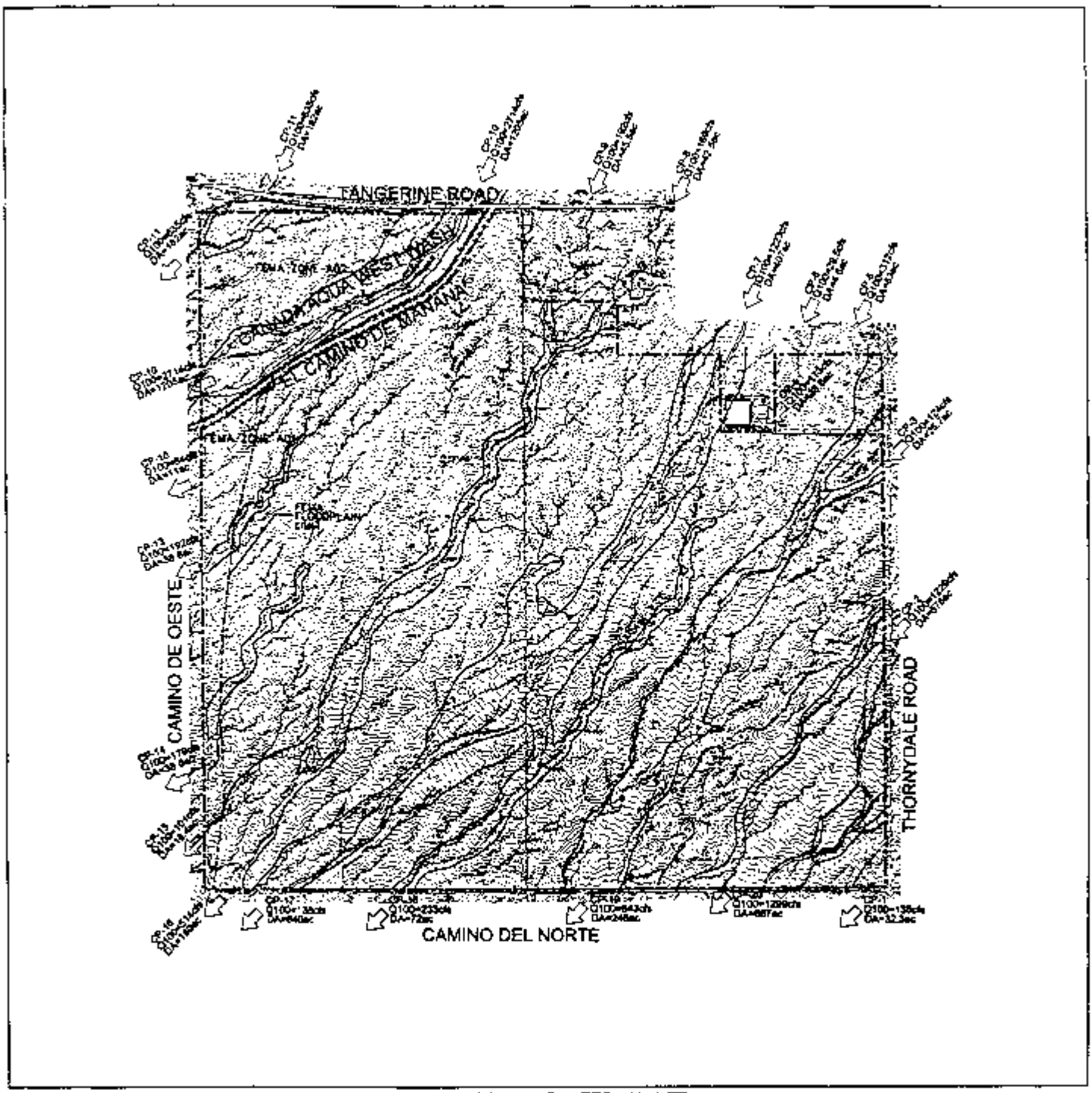
The Property was examined for cultural resources for the first time in 1981. One known site occurs on the Property. The site was recorded as AZ AA: 12: 200 (ASM). It is located in the southwest area of the Property, approximately 24 meters north of the southern Property boundary. An additional archeological survey was conducted on the Property in 2001/2002. No additional sites were documented during the 2001/2002 surveys. Site AZ AA: 12: 200 (ASM) was revisited during the resurvey of the Property. Erosional processes over the last 20 years have degraded the existing uncollected artifacts and have not unearthed additional materials. The information on this site was fully recorded in 1981. As a consequence, no

important cultural materials more than 50 years old remain on the Property. Accordingly, there are no significant cultural resources on the Property (Enviro Engineering 2001). A copy of the most recent cultural resources survey is found in Appendix B.

3.12 Socioeconomic

The Pima Association of Government's web page (www.pagnet.org) presents demographic information from the 2000 censes for tract 46.34. The Property is located within the five to six square mile area. Of the 1,015 people living within the tract, 87 percent are White, 9.2 percent are Hispanic. The median income is $24,282 per capita and $61,818 per family. Seventy-four percent of the residents are salaried or wage earners, while 18 percent are government employees. There is 3.2 percent unemployment in the Town of Marana and 4.5 percent in Pima County. Just over 93 percent live in single-family homes and the average cost of a home in the tract is $182,000. Marana's economic base is one of service and recreation. There are over 2,000 acres zoned for industrial development near the freeway but none within five miles of the Property.

Figure 4 Jurisdictional Waters of the United States



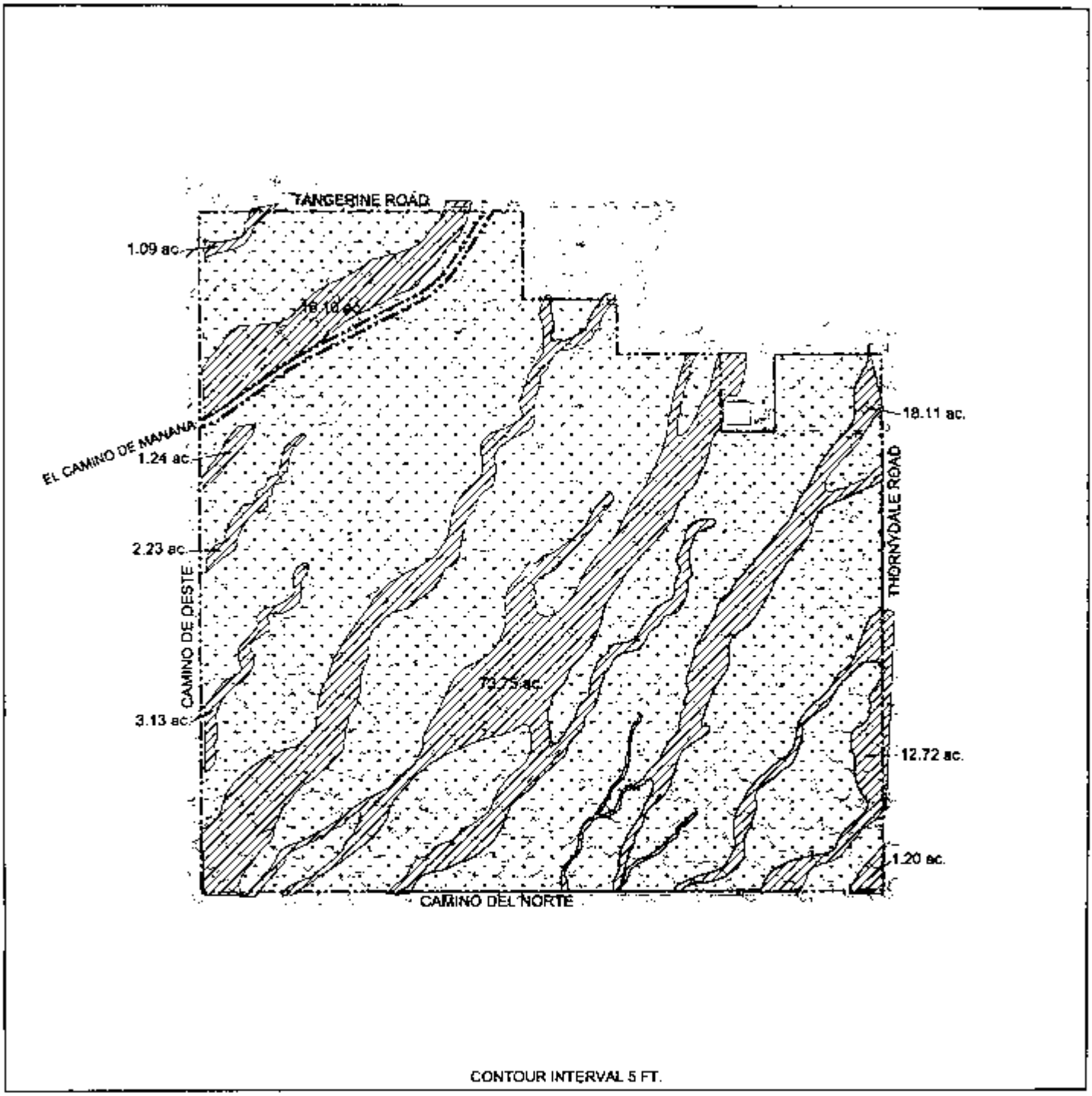
CONTOUR INTERVAL 1 FT.

THE PLANNING CENTER
110 S. CHURCH AVE., SUITE 1260
TUCSON, AZ 85701 (520) 623-6146

0' 500' 1000'

20-5082 11/19/2003

Figure 5 Habitat Map



4.0 ALTERNATIVES CONSIDERED INCLUDING THE PROPOSED ACTION

This section discusses details of the proposed action and other alternatives considered. These alternatives include: Alternative 1: Preferred Alternative and Proposed Design; Alternative 2: Modification of the Project Design; and Alternative 3: No Action Alternative.

4.1 Alternative 1: Preferred Alternative and Proposed Design

The Preferred Alternative is the proposed construction of residential development on 103 acres of the 512-acre Property. The Applicant and USFWS consider implementation of the HCP in connection with an ITP, if approved, to be an effective means to reconcile the Project with the ESA section 9 prohibition against take of, and to be beneficial to, the CFPO. The Plan for Development of the Project within the Skyranch Land Use Plan relies on a unique conceptual approach to residential development that conserves significant wildlife habitat. The Skyranch Land Use Plan was developed in conformance with the Town of Marana's General Plan and the USFWS Landowner Guidance for development inside CFPO habitat areas. The location of the residential areas within the context of habitat conservation creates an exciting opportunity for the proposed Project. It is hoped that this proposed development will become an example of land stewardship that adheres to the applicable stringent guidelines set forth by the USFWS for CFPO protection, thereby encouraging other developments within areas that had been, and may again be identified CFPO CH areas, to adopt similar practices.

The Skyranch Land Use Plan is depicted in Figure 6. The proposed land use includes two designations. Under the conditions outlined in section 7.2.1.1 of this document, the total area planned for development under the Project encompasses 20%-22% of the Property. Residential development will be concentrated in two areas: the western portion of the Property and a smaller area along the southeastern edge of the Property. There is a small area (200' x 160') reserved for a water reservoir. In addition, a small amount of land may be disturbed to provide utilities. These areas are the only areas where grading will take place. The total area to be graded constitutes the Project. The area to be graded is planned for 20% and will not exceed 22% of the Property. The utility easements will be linear in nature and restored to their natural state after installation. The open space at Skyranch encompasses 80% of the Property and includes open space in and around the residential areas as well as an open space corridor between residential areas. The design layout for the Preferred Alternative is depicted in Figure 6.

The Applicant believes it is unlikely that the Project will result in the take of any CFPO. The Project has been configured to avoid the areas within historically occupied CFPO breeding territories. The USFWS has stated that clearing or modification of historically unoccupied CFPO habitat does not constitute take as defined in section 9 of the ESA (62 Federal Register 10730). Nevertheless, it is possible that a CFPO may in the future occupy currently unoccupied areas of the Property or adjacent areas for nesting, or as an activity center during construction or operation of the Project during the ITP term. It is also possible that despite the protective provisions incorporated in this HCP, if such occupation of the Project or an area near the Project were to occur, the construction or operations of the Project could harm or harass the CFPO. This HCP mitigates for those potential impacts to the maximum extent practicable through two principal measures:

CFPO Habitat Management Reserve: In accordance with USFWS recommendations, the Applicant will only develop 103 acres (20 to 22%) (subject to the conditions outlined in section 7.2.1.1) of the Property. The remaining 409 acres (80%) will be preserved in perpetuity in its natural state as a CFPO Habitat Management Reserve (Reserve).

Contingency Measures: The Applicant has incorporated into the HCP contingency measures in the event that a CFPO establishes a new nest or activity center on or within 600 meters of the Project area.

4.2 Alternative 2: Modification of the Project Design

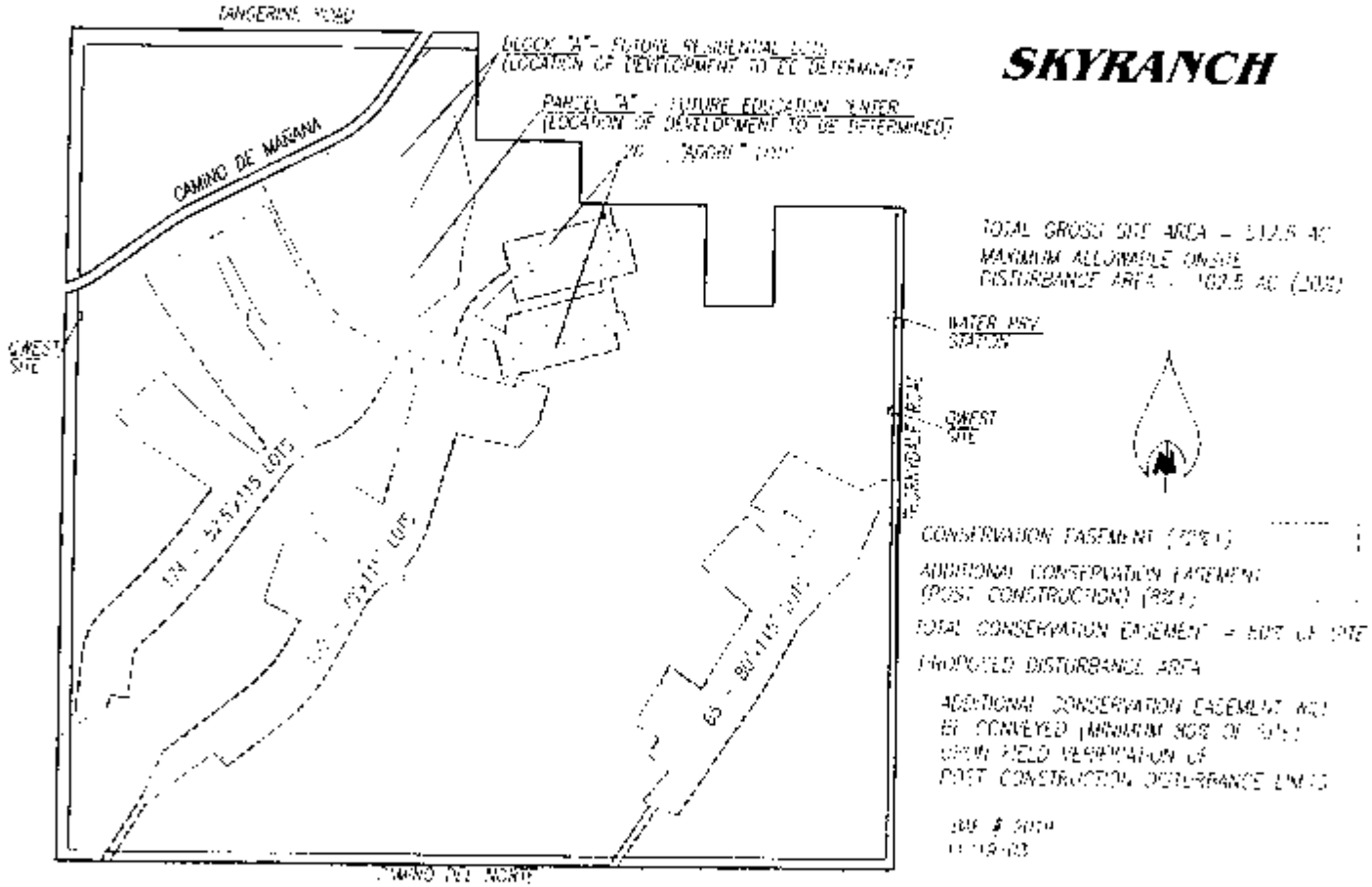
Exeter has considered a Modified Project Design that would consist of 74 acres of production lots, 16 acres of estate lots, 10.9 acres of multi-family housing, and one and one-half acres of commercial development. This project design was created in compliance with the USFWS Landowner Guidance for development inside CFPO habitat areas. In order to achieve a Site Disturbance Ratio of no more than 20%, the land use plan stipulates that the estate lots be sold with deed restrictions limiting ground disturbance to a 21,000 square foot development pad. The area outside the permitted building envelope would remain vegetated in its natural state. In informal discussions between USFWS and Exeter, USFWS expressed concern over potential difficulties in maintaining the integrity of portions of the Reserve that lie within the boundaries of deeded estate lots. Multi-family and commercial acres also have the potential to impact CFPO to a greater extent than single-family homes. Therefore, this alternative was considered non-practicable. The design layout for Alternative 2 is depicted in Figure 7.

4.3 Alternative 3: No Action Alternative

A No Action Alternative would not disturb portions of the Property proposed for development and would not result in any potential take of CFPO or modification of CFPO habitat. The Property is privately held and therefore subject to the economic pressures of maintenance, taxation, and liability. The sale of the Property for purposes other than development is not economically feasible. The owners of the Property are unable to economically justify the continued costs of maintaining the Property without a reasonable economic return. Therefore, this alternative was considered non-practicable under current and foreseeable circumstances.

Figure 6 Alternative 1: Skyranch Land Use Plan (Preferred Alternative and Proposed Design)

SKYRANCH



TOTAL GROSS SITE AREA = 313.5 AC
MAXIMUM ALLOWABLE ON-SITE
DISTURBANCE AREA = 102.5 AC (33%)

CONSERVATION EASEMENT (72%) .....

ADDITIONAL CONSERVATION EASEMENT
(POST CONSTRUCTION) (9%) .....

TOTAL CONSERVATION EASEMENT = 81% OF SITE

PROPOSED DISTURBANCE AREA

ADDITIONAL CONSERVATION EASEMENT AC
BE CONVEYED (MINIMUM 90% OF 9%)
UPON FIELD VERIFICATION OF
POST CONSTRUCTION DISTURBANCE LIMITS

JOB # 5070
11-19-03

NOTES:

TOTAL GROSS SITE AREA = 512.5 AC
MAXIMUM ALLOWABLE ONSITE
DISTURBANCE AREA = 102.5 AC

PHASE 1 (365 RESIDENTIAL LOTS):
ESTIMATED DISTURBANCE AREA= 91.7 AC±

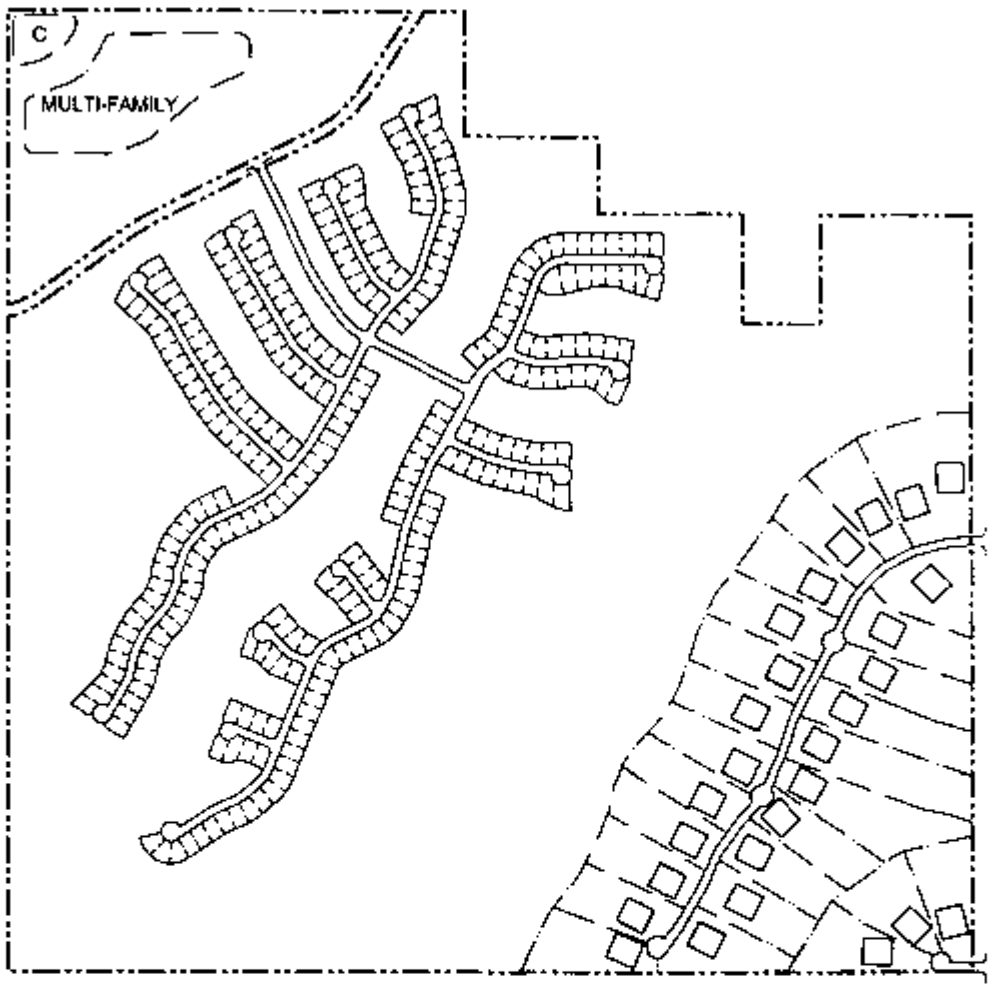
PHASE 2 (PARCEL A – EDUCATION CENTER):
ESTIMATED DISTURBANCE = 2.5 AC±

PHASE 3 (BLOCK A – MAX. 35 RESIDENTIAL LOTS):
ESTIMATED DISTURBANCE = 8.3 AC±

FINAL CONSERVATION EASEMENTS WILL BE PREPARED BY A REGISTERED LAND SURVEYOR COMPLETION OF CONSTRUCTION, FOR EXACT LOCATION AND AREAS OF THE CONSERVATION RESERVE FOR THE PROJECT.

THE FINAL CONSERVATION RESERVE EASEMENT SHALL BE SUBMITTED TO U.S. FISH & WILDLIFE FOR THEIR APPROVAL PRIOR TO RECORDATION AND TRANSFER TO THE CUSTODIAL AGENCY.

Figure 7 Alternative 2: Modification of the Project Design



General Notes:

TOTAL GROSS ACRES:	514.50
20 % DISTURBANCE ACRES:	102.90
COMMERCIAL ACRES:	1.5
MULTI FAMILY ACRES:	10.9
PRODUCTION LOTS (75 X 115 MIN.)	74.5
ESTATE LOTS (21,000 S.F PAD) INCLUDING R.O.W	16.00
TOTAL AREA DISTURBED:	104 ACRES

THE PLANNING CENTER
110 S CHURCH AVE., SUITE 126
TUCSON, AZ 85701 (520) 623-6141
0' 500' 1000'

5.0 ENVIRONMENTAL CONSEQUENCES

The USFWS identified sensitive species and habitat(s) to be addressed in analysis of the Project. Potential effects to the sensitive species shown on the following pages were analyzed as part of the Project. The CFPO is the only federally threatened or endangered species potentially affected by the Project.

5.1 Alternative 1: Preferred Alternative

5.1.1 On-site Impacts

5.1.1.1 Vegetation

The residential development of the Preferred Alternative will directly impact 103 acres of native Sonoran desertscrub. Natural vegetation in development areas will be removed and replaced with single-family homes and utilities. The residential development will be landscaped consistent with a desert theme, incorporating plant materials indigenous to the Sonoran Desert. Four hundred nine (409) acres of the 512-acre Property, or eighty percent (80%) of the Property will be preserved as a Reserve. Spine washes bisecting the Property from northeast to southwest will be preserved except for a single road crossing. Vegetation salvage plans for development areas will substantially reduce impact to vegetation. Development would occur where vegetation consists primarily of upland Sonoran desertscrub. Existing native vegetation will be maintained in development areas to the maximum extent practicable.

5.1.1.2 Wildlife

Wildlife within those areas planned for development would be displaced to adjacent areas during the construction process. Following construction, landscape vegetation and preserved trees would provide habitat for those species tolerant of suburban and urban development. Direct and indirect effects of development may result in negative or positive impacts to the populations of some wildlife species. Populations of some suburban adapted species are likely to increase because of increases in availability of food near proposed development areas and their preference for, or tolerance of developed areas. The specific on-site impacts for the sensitive species considered in this document are presented below.

5.1.1.3 Listed, Proposed, and Candidate Species

Cactus Ferruginous Pygmy-Owl

Through development, the Project will directly affect 103 acres of Arizona upland habitat. A small area of xeroriparian habitat may be affected by construction of an internal access road, which will cross the washes at several points. In addition, a limited amount of habitat may be temporarily disturbed to provide utility access. All areas disturbed for the purposes of the installation of utilities will be restored to their natural

state. The remainder of the xeroriparian wash habitat on the Property will be maintained as open space.

TOA, Inc. conducted approximately 43 hours of CFPO presence/absence surveys in 2000 throughout the portions of the Property unoccupied by any CFPO. TOA, Inc. detected no additional individuals of the species outside of known CFPO territories. The CFPO detected during focused surveys were members of known pygmy-owl pairs whose territories are centered outside of the Property. In 2001, TOA, Inc. conducted an additional 45 hours of surveys on the Property. These surveys resulted in one unconfirmed detection on the Property in an area within a known CFPO territory. AGFD documented two juvenile CFPO dispersing across the Property in August 2001. Ongoing surveys in 2002 and 2003 failed to detect any CFPO. Two of the three original CFPO territories on the Property are thought to be unoccupied as of this writing. The status of the third territory is unknown and presumed vacant. The status of the activity center established by a dispersing juvenile in 2002 is also unknown and presumed vacant. The land use plan developed by the Applicant avoids those portions of known historical CFPO home ranges that extend into the Property. All areas to be mass graded by the Permittee are located outside of documented presently or historically occupied CFPO breeding habitat. In the listing package for the CFPO, the USFWS stated that the clearing of unoccupied CFPO habitat does not constitute take as defined in section 9 of the ESA (62 Federal Register 10730). The conservation measures outlined within this HCP have been designed to ensure that the implementation of the project will have no adverse effects on the CFPO.

The Property consists of 512 acres of proposed CFPO Critical Habitat. The Development Plan for the Property includes 103 acres of habitat to be developed as residential property in the Project, 409 acres of habitat to be preserved as natural open space in the Reserve.

Development of the Project will result in the modification of (103) acres of proposed CH. This represents .0001% of the total acreage of proposed CFPO CH, and .14% of the total acreage within Unit 3 of proposed CH. The stated recovery goal for preservation of CH in recovery Unit 3 is an aggregate of 20% disturbance. The area of proposed CH to be modified by development of the Project will result in a statistically insignificant decrease in the amount of potential and suitable habitat for the species (section 3.3.1). The area of disturbance of the Project is well within the recovery goals for the CFPO.

With development of the Project, 409 acres of the Property will remain natural open space in the Reserve. This open space follows and provides linkage to xeroriparian wash corridors that traverse the Property. The undisturbed open space will preserve nearly 100% of the xeroriparian habitat on site. There is one xeroriparian wash corridor that will be crossed by an access road. At the recommendation of AGFD and USFWS, the vegetation on either side of this road crossing will be enhanced by the Permittee or Reserve management entity to avoid disrupting the dispersal of CFPO or other wildlife. Xeroriparian and adjacent upland set aside areas will provide linkage between

undeveloped habitats on all sides of the Property. The vegetation preserved within these open spaces will provide habitat for both resident and transient species. CFPO have been known to occupy and disperse along linear xeroriparian habitats (Scott Richardson, AGFD, pers. comm. May 27, 1999 and August 16, 2000). Productive CFPO nest sites are known to occur in close proximity to dense development provided adequate open space and dispersal corridors are present. Existing low-density development has been shown to support CFPO. For the foreseeable future, surrounding state trust land and other potential CFPO habitat will provide open space suitable for CFPO occupation.

The Reserve includes three dispersal corridors (Figure 6). The primary dispersal corridor is located in the center of the Property and has a width of 1270 to 2583 feet. A secondary dispersal corridor is located along a wash between the central and western development area of the Project. This corridor has a minimum width of 300 feet. The development plan for the Project has been designed to accommodate potential CFPO dispersal along the south end of Tangerine Road with a buffer area of 300 feet at its narrowest point. The Applicant believes that the Project design will not interfere with CFPO dispersal.

Lesser Long-Nosed Bat

There are no known roost sites for the lesser long-nosed bat in the vicinity of the Property. This species forages widely, thus it is remotely possible that implementation of the Project may affect foraging areas. Existing plant-salvage statutes will offset the potential loss of forage species. There are numerous potential foraging areas closer to known roosting areas. The Applicant believes that the development of the Preferred Alternative will not have any detectable effects on the lesser long-nosed bat.

Desert Tortoise

Effects to individual desert tortoise resulting from the implementation of the Preferred Alternative are remotely possible. As there are no boulder strewn areas or washes with caves on the Property, desert tortoises are expected to be rare or absent on the Property. However, it is remotely possible that a small number of individuals will be directly affected by construction activities. If a desert tortoise is discovered on the site during the construction phase of the Project, the AGFD tortoise handling guidelines will be adhered to. The Applicant believes that the Preferred Alternative will not have any detectable effects on the desert tortoise.

Gila Monster

Gila monster habitat requirements and preferences are very similar to those of the desert tortoise. It is remotely possible that a small number of individuals will be directly affected by construction activities. The Applicant believes that the Preferred Alternative will not have any detectable effects on the Gila monster.

Gilded Flicker

The gilded flicker is widespread in Pima County and common in both rural and suburban habitats. Though some individual birds may be affected, no population level effects are anticipated. The Applicant believes that the Preferred Alternative will not have any detectable effects upon the gilded flicker.

Abert's Towhee

The Abert's towhee is common throughout its range though is thought by some to be declining in Pima County. This bird seems to adapt well to suburban development and is a common backyard bird in Phoenix (Tom Gatz, USFWS, pers. comm.) and northwest Tucson (M. Cross, personal observation). Although some individual birds may be affected, no population level effects are anticipated. The Applicant believes that the Preferred Alternative will not have any detectable effects upon the Abert's towhee.

Tumamoc Globeberry

Effects upon individual Tumamoc globeberries may occur during the implementation of the Project. This species was de-listed by the USFWS. Sufficient populations exist in remote areas throughout the region to ensure that the development of the Preferred Alternative will not have any detectable effects upon the Tumamoc globeberry.

5.1.1.4 Wetlands

No wetlands are expected to be disturbed as a result of the Preferred Alternative; thus, no direct effects to wetlands are expected.

5.1.1.5 Geology and Soils

Direct impacts to geologic features and soils as a result of the Preferred Alternative are expected to be minor.

5.1.1.6 Land Use

The Preferred Alternative would contribute to the conversion of undeveloped land in Pima County. However, the proposed Reserve would also insure that 80 percent of the Property would be preserved and managed for the benefit of the CFPO in perpetuity.

5.1.1.7 Water Resources

The Preferred Alternative would contribute to the overall demand for water resources in the greater Marana area.

5.1.1.8 Jurisdictional Waters of the United States

Of the nine drainages identified on the Property as being jurisdictional, eight will be left undisturbed and one will be impacted. Impacts to waters

of the United States will consist of a single road crossing. Total impact to Jurisdictional Waters of the United States will be less than one acre. A CWA section 404 nationwide permit will be obtained.

5.1.1.9 Air Quality

Construction of the Project will result in minor, short-term impacts to air quality. An increase in particulate matter can be anticipated as a consequence of soil disturbance and operation of heavy equipment during roadway construction. These impacts are short-term in nature and will be minimized by standard dust and erosion control practices, such as hay bales, and other erosion barriers to control soil erosion, and use of water trucks to minimize fugitive dust emissions. Paved roads within developed areas will, in the long-term, reduce particulate emissions. There will be an increase in vehicle emissions due to increased traffic from future homeowners and service vehicles associated with the Project. Ultimately, landscaping and development of the parcel as a residential community is expected to reduce dust emissions below current levels.

The Preferred Alternative would contribute to short-term degradation of air quality in Pima County, primarily through an increase in automobile emissions.

5.1.1.10 Water Quality

The Preferred Alternative may result in an increase in levels of pollutants in storm water runoff that may add to that produced by other existing or planned developments in the region. Adherence to local and federal regulations will minimize the potential for increased levels of pollutants in storm water runoff to occur.

5.1.1.11 Cultural Resources

No direct impacts to significant cultural resources are expected from completion of the Preferred Alternative. The prehistoric site known to occur on site will be within the Reserve.

5.1.1.12 Socioeconomic

The Preferred Alternative would increase the population of the area. The Project would not displace anyone living in the area and should not materially impact the present ratio of minority races living near the site or in Pima County. As there are no commercial or manufacturing elements to the Project, only maintenance and service jobs may result.

5.1.2 Indirect Effects

NEPA defines indirect effects as those that are "caused by the action and are later in time or farther removed in distance, but are reasonably foreseeable" (40 CFR 1508.8). Indirect effects may include growth inducing effects and other effects related to induced change in the pattern of land use, population density or growth rate, and related effects on air, water, and other systems including ecosystems.

5.1.2.1 Vegetation

No indirect effects to vegetation are anticipated.

5.1.2.2 Wildlife

Wildlife within those areas planned for development would largely be displaced to adjacent areas within the Reserve or off the Property during the construction process. Following construction, landscape vegetation and preserved trees would provide habitat for those species tolerant of suburban and urban development. Some species benefit while others will move out of the area to be developed. It is assumed that the Reserve will provide suitable habitat for some, if not all, of the animals displaced by the Project. Due to potential indirect effects of urbanization there may be an increase of some problem animals such as domestic cats and European starlings (*Sturnus vulgaris*). Free roaming cats are known predators of CFPO and their prey species. European starlings may compete with CFPO and other cavity nesting birds for available nest sites.

5.1.2.3 Listed, Proposed, and Candidate Species

Cactus Ferruginous Pygmy-Owl

Potential indirect impacts to CFPOs, whether significant or insignificant, include:

- Changes in vegetation structure downstream of the Project area as a result of modifications of surface-water hydrology;
- Increases in traffic associated with increased population levels causing increased traffic noise adjacent to existing roads reducing habitat suitability and an increased potential for mortality due to vehicle collisions;
- Increased starling densities associated with increased development within the Project vicinity;
- Increased potential for mortality resulting from collisions with windows, fences, etc.;
- Increased potential for mortality from cats and other domestic pets; and
- Increased potential for mortality from secondary poisoning due to increased toxins in the environment.

Each of these is discussed below.

Development will increase the impervious surface area and decrease the time concentration for storm water runoff. However, an on-site storm water management plan in compliance with applicable local regulation that includes specific requirements for storm water detention/retention to control the peak discharge will be developed. Implementation of the plan will ensure collection and release of runoff commensurate with current

local drainage ordinances. This will maintain the peak of the hydrograph within downstream drainages to a level commensurate with existing natural levels. It will prolong the duration of the hydrograph at the discharge point, increasing available water to these natural arroyo systems and potentially increasing the biomass of vegetation associated with these downstream areas. Measurable, indirect impacts to any CFPO are not expected.

Increased population levels will result in increased vehicle trips per day on streets serving the Property, elevating noise levels adjacent to existing roadways. Elevated noise levels will vary throughout the day and correspond to the regular fluctuations in traffic patterns. Levels are not anticipated to increase to a magnitude that would require noise mitigation based on impacts to sensitive human receptors. Noise effects will be localized along major arterial roadways and will not broadly affect the surrounding area on or off the Property.

The Applicant is unaware of any data that suggest CFPOs are adversely impacted from gradual increases of noise levels such as those associated with daily traffic fluctuations. Expected levels of disturbance from gradual increases in traffic loads will be part of the background noise levels and will not be a disruptive, sustained noise disturbance.

Examples of wildlife habituation to elevated noise levels are not uncommon. The bald eagle population at the Aberdeen Proving Ground, in the Chesapeake Bay area, has increased over the last several decades despite repeated detonation of ordinance in close proximity to these birds (G.S. Mills, pers. comm. 1996). These eagles had apparently habituated to noise levels as high as 150 decibels based on a lack of differences in observed behaviors following weapons noise events and at times without weapons noise (B. Brown, pers. comm. 1996). The ability of owl populations to habituate to elevated noise levels associated with the introduction of noise-generating activities that occur on a regular basis is indicated indirectly by observations of the University of Arizona on the Barry M. Goldwater Range in southern Arizona (University of Arizona 1996). This research found relatively high densities of several species of owls in areas subjected to frequent aircraft over-flights.

Increased vehicle trips per day will result in a corresponding increased potential for CFPO road mortality. We are aware of no instances of CFPO vehicle mortality in northwest Tucson. There is evidence that CFPO in northwest Tucson may avoid major thoroughfares during periods of high traffic volume (USFWS 2003).

The USFWS referenced the AGFD concerns (62 Federal Register 46 10744) that increasing competition with exotic European starling for nest cavities may be a threat to cavity nesters like the CFPO. To our knowledge there has been no systematic study to determine if the presence of starlings, in addition to other native cavity nesters, appreciably limits available nest sites resulting in population level effects on CFPO. The European starling is well within the selected prey sizes for bird species that are taken by CFPO. Competition for nesting cavities with this species may well result in predation of the entrapped starlings

by CFPO. Indirect impacts to CFPO from nesting-cavity competition with the European starling are not expected.

Development of the Project may result in the increased potential for CFPO mortality resulting from collisions with fences and windows. However, this potential will be minimized due to the fact that all development will be clustered within discrete areas outside of the Reserve. A perimeter fence will surround these areas of the Project. This perimeter fence will be constructed in a manner consistent with USFWS recommendations in order to minimize the potential for accidental CFPO mortality. CFPO are not known to enter high-density developments similar to the Project. Therefore, there is little potential for CFPO mortality due to collisions with windows.

The increased potential for mortality from cats and other domestic animals will be addressed by a public education and awareness program for residents within and adjacent to the Property that will develop measures that reduce or eliminate free-roaming cats and other potentially harmful domestic animals. This education program will also provide information to the public related to the hazards of secondary poisonings due to increased toxins in the environment. If such hazards are reported, the USFWS will be immediately notified and appropriate corrective actions will be implemented.

Lesser Long-Nosed Bat

No indirect effects to the lesser long-nosed bat are anticipated.

Desert Tortoise

As previously stated the potential for the desert tortoise to occur on the Property is low (see section 5.1.1.3 above). Any desert tortoise that may occur on the Property may be impacted through collection and/or road mortality.

Gila Monster

Gila monster habitat requirements and preferences are very similar to those of the desert tortoise. Thus, the potential for Gila monsters to occur on the Property is low. Any Gila monsters that may occur on the Property may be impacted through illegal collection, and/or road mortality.

Gilded Flicker

No indirect effects to the gilded flicker are anticipated.

Abert's Towhee

No indirect effects to the Abert's towhee are anticipated.

Tumamoc Globeberry

No indirect effects to the Tumamoc globeberry are anticipated.

5.1.3 Cumulative Effects

This section considers the past, present, and future projects, authorized or under review that are considered to contribute to the cumulative impacts on not only endangered, threatened, and other rare species, but also on society and the human environment in Pima County.

5.1.3.1 Vegetation

The Preferred Alternative would result in disturbance of the Sonoran desertscrub, it will contribute slightly to the loss of this vegetation type in Pima County. However, permanent protection of 409 acres of native vegetation in the Reserve will contribute to the perpetual protection of the native plant communities in the area. The 409 acres will be managed as a Reserve in a manner beneficial to the CFPO and other native species.

5.1.3.2 Wildlife

The Preferred Alternative would contribute to a cumulative reduction of habitat for some wildlife species intolerant of human disturbance or presence when added to impacts resulting from other development, road construction, and other types of land use projects in Pima County. Wildlife species associated with urban and suburban settings would likely increase, while species intolerant of development may locally decrease. However, protecting the native plant and animal communities on the 409-acre Reserve will contribute to the perpetual protection of native wildlife population both on and off the Property.

5.1.3.3 Listed, Proposed, and Candidate Species

Cactus Ferruginous Pygmy-Owl

The Applicant knows of no significant state or private activities that are *reasonably certain to occur*[1] in the immediate vicinity of the Project area that will not require federal authorization. Any significant project proposed for this area will probably require some type of federal permit under the CWA and ESA section 7 consultation. The 103 acres of proposed CH to be modified by the Project represents 0.0000852% of the total previously designated CH and 0.0013926% of the total area of proposed CH in Unit 3. Increased disturbance resulting from the Project will have deminimus, negligible effect on the ability to meet CFPO recovery landscape objectives because areas of protected open space will provide opportunities for nesting and connectivity. Implementation of

[1] According to the Endangered Species Consultation Handbook, Reasonably certain to occur means *"A non-federal action is 'reasonably certain" to occur if the action requires the approval of a state or local resource or land use control agency and such agencies have approved the action, and the project is ready to proceed."* [Handbook at Appendix D]

the Preferred Alternative will have no cumulative adverse effect on the CFPO because of the conservation measures, which will be implemented to maintain nesting and dispersal habitat.

Lesser Long-Nosed Bat

The development of the Preferred Alternative will not have any detectable cumulative effects on the lesser long-nosed bat.

5.1.3.4 Wetlands

No wetlands are expected to be disturbed as a result of the Preferred Alternative; thus, no cumulative impacts to wetlands are expected.

5.1.3.5 Geology and Soils

Cumulative impacts to geologic features and soils as a result of the Preferred Alternative are expected to be minor.

5.1.3.6 Land Use

The Preferred Alternative would contribute to the on-going conversion of undeveloped land to developed land in Pima County. However, the proposed reserve would also ensure that a significant portion of the proposed CFPO CH is preserved and managed, in perpetuity, for the express purpose of CFPO conservation.

5.1.3.7 Water Resources

The Preferred Alternative would contribute to the overall demand for water resources in the greater Marana area.

5.1.3.8 Air Quality

The Preferred Alternative would contribute to degradation of air quality in Pima County, primarily through an increase in automobile emissions.

5.1.3.9 Water Quality

The Preferred Alternative may result in an increase in levels of pollutants in storm water runoff that may add to that produced by other existing or planned developments in the region. Adherence to local and federal regulations will minimize the potential for increased levels of pollutants in storm water runoff to occur.

5.1.3.10 Cultural Resources

No cumulative impacts to significant cultural resources are expected from completion of the Preferred Alternative.

5.1.3.11 Socioeconomic

The Preferred Alternative would contribute to an increase in population, property values, and traffic in Pima County. The County will, over time, become more urbanized with each new development. The percentage of minorities living in the Marana area is less than the average for Pima County; therefore, no significant cumulative environmental justice issues are expected. It is possible that the Project will increase the number of jobs available to persons of lesser means in Pima County.

5.1.4 Assessment of Take

The Property consists of 512 acres of identified CFPO habitat. The Development Plan for the Property includes 103 acres of habitat to be developed as residential property, 409 acres preserved as natural open space in the reserve. The Property contains portions of three previously, but not currently, occupied territories. In addition, data shows CFPOs dispersing through the Property. As incidental take in the form of harm or harassment may occur on the Property during construction and operation of the Project, the incidental take to be addressed by the ITP will be:

- Two (2) non-breeding CFPO the first year of construction;
- One (1) non-breeding CFPO the second year of construction;
- One (1) non-breeding CFPO the last two years of construction and for the remainder of the permit;
- The above anticipated take is not cumulative, but instead, what is likely to occur in the specific year or years identified above.

Thus, for example, if two dispersing owls are not detected on the Property the first year, the Applicant will not be covered for any additional take other than what is stated above for subsequent years.

Pursuant to 50 CFR 17.3, "Harass" in the definition of "take" in the Act means an intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. CFPOs behavioral patterns could be disrupted from activities and subsequent human occupation of the development associated with the Project. The following are examples of activities that could disrupt normal CFPOs behavioral patterns that USFWS speculates if significant enough may constitute harm or harassment.

Also pursuant to 50 CFR 17.3, "Harm" in the definition of "take" in the Act means an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

Increased noise levels may appreciably disrupt normal behavior patterns such as dispersal. The construction of the residential development will be a relatively short-term event, with a foreseeable end in noise disturbance activities (within approximately five years, at most). It is unknown whether noise habituation occurs in some CFPOs as it does with other bird species.

Although they are considered crepuscular/diurnal raptors, lighting used for construction purposes could disrupt normal behavior patterns such as roosting, calling and feeding. Adherence to the "pygmy-owl shows up" guidelines outlined in section 7.2.1.1 will minimize the potential for this to occur.

Lesser Long-Nosed Bat

There are no known roost sites for this species in the vicinity of the Property. The nearest known maternity roost sites are the Old Mammon Mine (45 miles away), Copper Mountain Mine (100 miles away), and Bluebird Mine (112 miles away). Other major non-maternity roost sites for this species are located at the Cave of Bells (southeastern Pima County) and the Patagonia Bat Cave. These non-maternity roost sites are 63 miles and 40 miles away from the Property, respectively (Westland Resources, 2000). This species forages widely, thus it is remotely possible that implementation of the Project may affect some foraging areas. Existing plant-salvage statutes will offset the potential loss of forage species. The numerous potential foraging areas closer to known roosting areas, make the possibility of effects extremely remote.

5.1.5 Off-site Impacts

5.1.5.1 Vegetation

No off-site impacts to vegetation are expected on adjacent properties as a result of completion of the Preferred Alternative. Mitigation proposed as part of the Preferred Alternative is expected to provide greater protection of plant communities contained in the 409 acres of on-site Reserve.

5.1.5.2 Wildlife

Wildlife within those areas planned for development would largely be displaced into adjacent areas during the construction process. Those species dependent on the existing habitat proposed for development will likely decrease in the local area. Following construction, landscape vegetation and preserved trees would provide habitat for those species tolerant of suburban and urban development, possibly resulting in increased populations in the surrounding area. Direct and indirect effects of development may result in negative or positive impacts to the populations of some species in the area.

5.1.5.3 Listed, Proposed, and Candidate Species

No adverse impacts are expected to occur to off-site listed or sensitive species.

5.1.5.4 Wetlands

No wetlands are expected to be disturbed as a result of the Preferred Alternative; thus, no off-site impacts to wetlands are expected.

5.1.5.5 Geology and Soils

Off-site impacts to geologic features and soils as a result of the Preferred Alternative are expected to be minor.

5.1.5.6 Land Use

Adjacent land uses will not be impacted during construction. Low-density residential development to the south and west will be buffered from development on the Property by development setbacks and the Reserve.

5.1.5.7 Water Resources

The Preferred Alternative would contribute to the overall demand for water resources in the greater Marana area.

5.1.5.8 Air Quality

Construction of the Project will result in minor, short-term impacts to air quality. An increase in particulate matter can be anticipated as a consequence of soil disturbance and operation of heavy equipment during roadway construction. These impacts are short-term in nature and will be minimized by standard dust and erosion control practices, such as hay bales, and other erosion barriers to control soil erosion, and use of water trucks to minimize fugitive dust emissions. Paved roads within developed areas will, in the long-term, reduce particulate emissions. There will be an increase in vehicle emissions due to increased traffic from future homeowners and service vehicles associated with the Project. Ultimately, landscaping and development of the parcel as a residential community is expected to reduce dust emissions below current levels.

The Preferred Alternative would contribute to degradation of air quality in Pima County, primarily through an increase in homeowner vehicle emissions.

5.1.5.9 Water Quality

The Preferred Alternative has the potential for causing off-site impacts to water quality because of increased pollutants in the storm water run off. This is because of the increased impermeable surfaces and human activity. Adherence to local and federal regulations will minimize the potential.

5.1.5.10 Cultural Resources

No off-site impacts to significant cultural resources are expected from completion of the Preferred Alternative.

5.1.5.11 Socioeconomic

The Preferred Alternative would increase the population of the area. The Project would not displace anyone living in the area and should not

materially impact the present ratio of minority races living near the site or in Pima County. As there are no commercial or manufacturing elements to the Project, only maintenance and service jobs may result.

5.2 Alternative 2: Modification of the Project Design

5.2.1 On-site Impacts

5.2.1.1 Vegetation

The residential development of the Preferred Alternative will directly impact 103 acres of native Sonoran desertscrub. Natural vegetation in development areas will be removed and replaced with single-family homes and associated roads and utilities. Alternative 2 also contains 409 acres of Natural Open Space. However, approximately 100 acres of the open space in Alternative 2 is located within individual estate lots. This could diminish the value of this open space as viable wildlife habitat, especially for non-urban adapted species. The residential development will be landscaped consistent with a desert theme, incorporating plant materials indigenous to, and blending in with, the Sonoran desert. Spine washes bisecting the Property from northeast to southwest will be preserved except for a single road crossing. Vegetation salvage plans for development areas will substantially reduce impact to vegetation. Development would occur where vegetation consists primarily of upland Sonoran desertscrub. Existing native vegetation will be maintained in development areas to the maximum extent practicable.

5.2.1.2 Wildlife

Wildlife within those areas planned for development would largely be displaced to adjacent areas during the construction process. Following construction, landscape vegetation and preserved trees would provide habitat for those species tolerant of suburban and urban development. Direct and indirect effects of development may result in negative or positive impacts to the populations of some wildlife species. Populations of some suburban adapted species are likely to increase because of increases in availability of food for them near proposed development areas and their preference for, or tolerance of developed areas. Due to the fact that approximately 100 acres of the open space in Alternative 2 is located within individual estate lots, species that are intolerant of human activities will be impacted more than the Preferred Alternative. The specific on-site impacts for the sensitive species considered in this document are presented below.

5.2.1.3 Listed, Proposed, and Candidate Species

Cactus Ferruginous Pygmy-Owl

The on-site impacts of the implementation of Alternative 2 are nearly identical to the impacts outlined in the Preferred Alternative. Through development, the implementation of Alternative 2 will directly affect 103 acres of Arizona upland habitat. A small area of xeroriparian habitat may

be affected by construction of an internal access road, which will cross the washes at several points. In addition, a limited amount of habitat may be temporarily disturbed to provide utility access. All areas disturbed for the purposes of the installation of utilities will be restored to their natural state. The remainder of the xeroriparian wash habitat on the Property will be maintained as open space. The primary difference between the Preferred Alternative and Alternative 2 is that a significant amount (approximately 100 acres) of the open space would be contained within deeded estate lots. Alternative 2 also incorporates a limited amount of commercial and multi-family homes in the development plan. Deed restrictions on the estate lots would ensure that the open space within these lots would remain undisturbed. However, in informal discussions between USFWS and Exeter, the USFWS expressed concern over potential difficulties in maintaining the integrity of portions of the Reserve that lie within the boundaries of deeded estate lots. Multi-family and commercial acres also have the potential to impact CFPO to a greater extent than single-family homes. Therefore, this alternative was considered non-practicable.

Lesser Long-Nosed Bat

There are no known roost sites for the lesser long-nosed bat in the vicinity of the Property. This species forages widely, thus it is remotely possible that implementation of the Project may affect some foraging areas. Existing plant-salvage statutes will offset the potential loss of forage species. There are numerous potential foraging areas closer to known roosting areas. The Applicant believes that the development of Alternative 2 will not have any detectable effects on the lesser long-nosed bat.

Desert Tortoise

Effects to individual desert tortoise resulting from the implementation of Alternative 2 are remotely possible. As there are no boulder strewn areas or washes with caves on the Property, desert tortoises are expected to be rare or absent on the Property. It is possible that a small number of desert tortoises may be directly affected by construction activities. If a desert tortoise is discovered on the site during the construction phase of the project, the AGFD tortoise handling guidelines will be adhered to. The Applicant believes that the development of Alternative 2 will not have any detectable effects on the desert tortoise.

Gila Monster

Gila monster habitat requirements and preferences are very similar to those of the desert tortoise. It is possible that a small number of individuals will be affected. The Applicant believes that Alternative 2 will not have any detectable effect on the population level of the Gila monster.

Gilded Flicker

The gilded flicker is widespread in Pima County and common in both rural and suburban habitats. Though some individual birds may be affected, no population level effects are anticipated. The Applicant believes that Alternative 2 will not have any detectable effect upon the gilded flicker.

Abert's Towhee

The Abert's towhee is common throughout its range though is thought by some to be declining in Pima County. This bird seems to adapt well to suburban development and is a common backyard bird in northwest Tucson. Although some individual birds may be affected, no population level effects are anticipated. The Applicant believes that Alternative 2 will not have any detectable effect upon the Abert's towhee.

Tumamoc Globeberry

Effects upon individual Tumamoc globeberries may occur during the implementation of the Project. This species was de-listed by the USFWS. Sufficient populations exist in remote areas throughout the region to ensure that the development of the Alternative 2 will not have any detectable effects upon the Tumamoc globeberry.

5.2.1.4 Wetlands

No wetlands are expected to be disturbed as a result of Alternative 2; thus, no direct effects to wetlands are expected.

5.2.1.5 Geology and Soils

Direct impacts to geologic features and soils as a result of Alternative 2 are expected to be minor.

5.2.1.6 Land Use

Alternative 2 would impact land use in the same way as the Preferred Alternative. It would contribute to the conversion of undeveloped land in Pima County. However, the proposed Reserve would also insure that 80 percent of the Property would be preserved and managed for the benefit of the CFPO in perpetuity.

5.2.1.7 Water Resources

Alternative 2 would contribute to the overall demand for water resources in the greater Marana area.

5.1.1.8 Jurisdictional Waters of the United States

Of the nine drainages identified on the Property as being jurisdictional, eight will be left alone and one will be impacted. Impacts to waters of the United States will consist of a single road crossing. Total impact to

Jurisdictional Waters of the United States will be less than one acre. A CWA section 404 nationwide permit will be obtained.

5.2.1.9 Air Quality

Alternative 2 would contribute to degradation of air quality in Pima County, primarily through an increase in automobile emissions.

5.2.1.10 Water Quality

Alternative 2 may result in an increase in levels of pollutants in storm water runoff that may add to that produced by other existing or planned developments in the region. Adherence to local and federal regulations will minimize the potential for increased levels of pollutants in storm water runoff to occur

5.2.1.11 Cultural Resources

No direct impacts to significant cultural resources are expected from completion of Alternative 2.

5.2.1.12 Socioeconomic

Alternative 2 would have the same socioeconomic impacts as the Preferred Alternative.

5.2.2 Indirect Effects

The indirect effects for the implementation of Alternative 2 will be equivalent to those outlined for the Preferred Alternative (section 5.1).

5.2.3 Cumulative Effects

The cumulative effects for the implementation of Alternative 2 will be equivalent to those outlined for the Preferred Alternative (section 5.1).

5.2.4 Assessment of Take

The assessment of take for the implementation of Alternative 2 will be equivalent to those outlined for the Preferred Alternative (section 5.1).

5.2.5 Off-site Impacts

The off-site impacts take for the implementation of Alternative 2 will be equivalent to those outlined for the Preferred Alternative (section 5.1).

5.3 Alternative 3: No Action Alternative

Under this alternative, the Applicant would not develop the Property and no impacts to or take of CFPO or other sensitive species would occur. However, abandonment of the Preferred Alternative would result in the loss of significant monies invested by the Applicant in the Property and would be economically impractical for the Applicant. Moreover, the

Property would have no active management for endangered species and no provision of land or money would go toward the long-term consideration of the CFPO.

6.0 HABITAT CONSERVATION PLAN

This HCP will mitigate for the possibility that a CFPO may at some point during the five year ITP term, if approved, occupy the Property or nearby areas for purposes of establishing a nest or activity center.

Section 10 of the ESA allows ITPs to be issued for projects that may take endangered species incidental to otherwise lawful activities. This HCP is intended to support issuance of such a permit to cover any such harm or harassment of a CFPO that would constitute a take and might result from construction of the Project. The Applicant believes that action authorized by this HCP is not likely to result in the death of any CFPO. This HCP is intended to ensure that development of the site does not appreciably reduce the likelihood of survival and recovery of the CFPO. On-site mitigation provided by this HCP significantly enhances conservation of the CFPO.

Exeter requests that USFWS issue an ITP under section 10(a)(1)(B) of the ESA to authorize the potential incidental take, in the form of harassment or harm of up to four non-breeding CFPO (according to the conditions outlined section 5.1.4), which in the future disperse across the Property, or in the vicinity of the Property, or establish a nest or an activity center on or immediately adjacent to the Project. The term of the ITP requested is for five (5) years, including construction and operation of the Project. The IA identifies responsibilities of the parties (section 10) and is incorporated by reference. Should an ITP be issued by the USFWS, this HCP outlines a program of habitat conservation and protection and includes the following major elements:

- A Reserve consisting of 409 acres will be set aside permanently for the benefit of the CFPO.

- A CE will be executed for the Reserve, concurrent with issuance of the ITP. Ninety percent (90%) (368 acres) of the Reserve will be dedicated in the CE. The remaining ten percent (10%) of the Reserve will be dedicated in the CE upon completion of Project improvements.

- The Reserve management entity will be selected by the Permittee and approved by USFWS. Please refer to the IA section 10.1.b. and section 10.2.b.

- After completion of all construction associated with the Project, upon the concurrence of the USFWS, the Reserve management entity shall be solely responsible for the surveying, monitoring, and reporting requirements of the HCP and IA.

- Pre-construction presence/absence surveys for the CFPO will be conducted according to current USFWS CFPO survey protocol.

- On-site monitoring will occur during the clearing, grading, and construction phase of the Project. The on-site monitor will ensure that all construction related activities will conform to the terms and conditions of the HCP/IA.

- Only passive recreational activities will be allowed in the Reserve. Passive recreation includes public pedestrian and equestrian access to existing undeveloped trails that transect the Reserve.

- Equestrian use of the Reserve will be limited to common saddle stock (horses, mules, and donkeys). Access to the Reserve will be limited to passive recreational riding occurring on established trails. No saddle stock will be permitted off of established trails.

No picketing or pasturage of saddle stock will be permitted on the Reserve at any time. All other forms of livestock will be strictly prohibited from the Reserve.

- The Permittee will develop and implement a Public Outreach program. The information will be distributed to potential homebuyers, neighbors, and other interested parties. The informational package will include a basic description of the conservation goals of the HCP/ITP, emphasizing measures taken to protect the CFPO. A copy of this informational brochure can be found in Appendix C of this document.

- An educational program will be developed by the Permittee, with USFWS approval in order to provide construction personnel and future residents of the Project with information regarding the CFPO, long-term preservation, and limits to use of the Reserve. All construction management personnel will be required to attend an environmental training session conducted by TOA, Inc., or a similarly qualified firm, prior to their participation in construction activities. This educational program will inform construction personnel of the following:

    a. The Endangered Species Act;
    b. Cactus ferruginous pygmy-owl ecology and regulatory status;
    c. The conservation goals of the HCP;
    d. The terms and conditions of the HCP;
    e. Actions to minimize and mitigate impacts;
    f. Development and reserve area boundaries;
    g. Specific limitations on construction activities on the Property;
    h. Prohibited activities; and
    i. Reporting recommendations and requirements.

- The following measures are general procedures for dealing with foreseeable, but unpredictable circumstances that could occur. With respect to these potential uncontrollable circumstances, the Permittee and the Reserve management entity will be required to undertake such corrective actions as may be technically justified and financially reasonable under the circumstances, in consultation with the USFWS. Where appropriate, these issues will also be addressed in the Property's CC&Rs.

    a. Vandalism in the Reserve – If detected, the USFWS as well as local law enforcement authorities will be immediately notified. Any effects of vandalism will be documented and then corrected, as appropriate, to meet the goals of the HCP as quickly as possible.
    b. Fire, wild or deliberate – Upon detection, the Northwest Fire District and the USFWS will be notified. Following extinguishment, any impacts will be assessed and documented.
    c. Activities of adjacent landowners – If adjacent landowners surrounding the Property undertake actions which affect the CFPO, the USFWS and the adjacent landowners, will be immediately notified.
    d. Cattle, other domestic/exotic livestock, and free ranging pets will not be allowed in the Reserve unless approved by USFWS.
    e. Motorized vehicles (ATVs, four-wheel drive vehicles, motorcycles, etc.) will be prohibited from the Reserve unless utilized to facilitate operation and maintenance of the Reserve.
    f. Drought – Efforts will be made to maintain and enhance natural flows of water to all areas of the Reserve.

- The changed circumstance[1] identified and provided for in this HCP is the possibility of a CFPO inhabiting a portion of the Property during construction and operation of the Project. No other circumstances that may develop can be foreseen, nor are they covered in the EA/HCP/IA.

- Any unforeseen circumstances[2] or conditions determined to be detrimental will trigger the need to consult with predetermined scientific personnel (such as TOA, Inc. or similarly qualified individuals or environmental firms) and the USFWS for advice on adaptive management. It would be economically infeasible and impracticable for the

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[1] Changed Circumstances

The following are Changed Circumstances, and corresponding conservation and mitigation measures, if any, that the Permittee shall implement in response to such Changed Circumstances, should they occur during the life of the ITP.

Specific changed circumstances addressed in this HCP are provided in Section 10.0.

As long as the terms of the HCP are being properly implemented, the USFWS shall not require the implementation of any conservation and mitigation measures by the Permittee in response to Changed Circumstances, other than those measures specified in this Subparagraph (a) of this footnote.

(a) Notice of Changed Circumstances & Implementation of Response

i) Permittee-initiated response to Changed Circumstances
The Permittee shall give written notice to USFWS within 30 days after learning that any of the Changed Circumstances listed in the HCP and Subparagraph (a) of this footnote has occurred. As soon as practicable thereafter, but no later than 90 days after learning of the Changed Circumstances, the Permittee shall modify its activities in the manner, and to the extent required by the HCP and Subparagraph (a) of this footnote, and report to the USFWS on its actions. The Permittee shall make any such required modifications without awaiting notice from the USFWS.

ii) USFWS-initiated response to Changed Circumstances.
If the USFWS determines that Changed Circumstances have occurred and that the Permittee has not responded in accordance with the HCP and Subparagraph (a) of this footnote, the USFWS shall so notify the Permittee in writing and direct the Permittee to make the required changes. Within 90 days after receiving such notice, the Permittee shall make the required changes and report to the USFWS on its actions.

(b) Effect of Changed Circumstances on this ITP and HCP.
Changed Circumstances are provided for in the HCP and, hence, do not constitute Unforeseen Circumstances or require amendment of this ITP or the HCP. Changed Circumstances do not constitute "new information" under 50 CFR § 402.16(b), and, hence, the occurrence of Changed Circumstances does not require the re-initiation of formal consultation by USFWS under Section 7 of the ESA on its action of issuing the ITP.

[2] Unforeseen Circumstances

(a) No Surprises Assurances
The CFPO is considered adequately addressed under this HCP and is, therefore, covered by "no surprises" assurances. In the event that it is demonstrated by the USFWS that Unforeseen Circumstances exist during the life of the ITP, and additional conservation and mitigation measures are deemed necessary to respond to Unforeseen Circumstances, the USFWS may require additional measures of the Permittee where the HCP is being properly implemented, but only after discussions between the USFWS and the Permittee, and only if such measures are limited to modifications within the Reserve conserved pursuant to the terms of the HCP or to the HCP's operating conservation program for the CFPO and maintain the original terms of the HCP to the maximum extent possible. Notwithstanding the foregoing the USFWS shall not:

i) Require the commitment of additional land, water or financial compensation by the Permittee without the consent of the Permittee; or

ii) Impose additional restrictions on the use of land, water or natural resources otherwise available for use by the Permittee under the original terms of the HCP, including additional restrictions on the Project to mitigate the effects of the Project.

(b) Effect of Unforeseen Circumstances on Permit
Except as provided in this footnote, notwithstanding the occurrence of Unforeseen Circumstances, as long as the Permittee continues to properly implement the provisions of the HCP and any additional measures required by the USFWS in accordance with Subparagraph 2 (a) above, the ITP will remain in full force and effect.

(c) Notice of Unforeseen Circumstances
The USFWS shall notify the Permittee in writing of any Unforeseen Circumstances of which the USFWS becomes aware that may affect the obligations of the Permittee under the ITP or the HCP.

Permittee to commit to future adaptive management actions without regard to available funding. For this reason, and in accordance with USFWS policy (65 Federal Register 35253 [June 1, 2000]), the purpose of this provision is to "clearly state the range of possible operating conservation program adjustments due to significant new information, risk, or uncertainty."

- Notwithstanding anything contained herein to the contrary, nothing in this HCP, and no adaptive management actions, shall require the Permittee or the Reserve management entity to commit any additional land or funding for the acquisition or conservation of additional land beyond the land included in the Reserve, or to commit additional funds for conservation or mitigation measures beyond those required in this HCP. Subject to that limitation, other adaptive management actions will be accomplished, to the extent practicable, exclusively through a reallocation of funding otherwise committed to the conservation program established by this HCP; such as by shifting funding from one management action to a new adaptive management action or by accelerating planned future funding for current adaptive management actions with a concomitant reduction in future funding obligation.

- The Permittee, with the approval of the USFWS, will develop a Reserve Management Plan (RMP). The Reserve management entity (and until the entity is selected, the Permittee) will be responsible for implementing the RMP, including any adaptive management action. In addition, subject to the limitations stated herein, the Reserve management entity (and until the entity is selected, the Permittee), as applicable, will cooperate with USFWS in the implementation of adaptive management actions to be funded by USFWS.

- Management objectives of the Reserve are, to the maximum extent practicable, and subject to limitations on the commitment of resources, to:

    a. Maintain the Reserve's habitat in the naturally occurring conditions on-site at the time of acquisition; and
    b. Protect the Reserve from damage or harm that may be caused by vandalism, motor vehicle use, livestock overgrazing, and free roaming domestic animals.

- The Permittee will submit an annual report as described in section 7.3.

- The Permittee and/or the Reserve management entity will conduct surveying and monitoring for the CFPO.

- The Permittee will establish an endowment for the operation, management, and monitoring of the Reserve. Sufficient funding will be provided to establish and manage the Reserve, as well as provide the construction safeguards around those portions of the Reserve where Project development will occur.

  The Applicant has been required by the Town of Marana to enter into an "Irrevocable Offer and Agreement to Dedicate Frontage Road." This dedicated right of way is contained within the Reserve. Therefore, it is the responsibility of the USFWS to seek from the Town of Marana, not the responsibility of the Permittee to provide, mitigation or other compliance with the requirements of the ESA if, and when, the undeveloped land subject to the Offer and Agreement is exercised for road use.

7.0 ACTIONS TO MINIMIZE AND MITIGATE IMPACTS

7.1 Biological Goals and Objectives

The biological goal of this HCP is to allow for the development of the Project while implementing measures that may move the CFPO towards recovery. Attainment of this goal will be promoted through the following objectives:

a. Conserve open space within the project boundaries;
b. Minimize potential effects to the CFPO related to construction activities; and
c. Reduce long-term and indirect effects to the CFPO through education, monitoring, and professional management to benefit the CFPO.

7.2 On-site Conservation Measures

The Permittee will comply with the measures set forth in this HCP.

- Areas identified on Figure 6, as the Reserve shall not be impacted at any time, except as provided elsewhere in this HCP.

- Within the Project area, if salvage of a saguaro is not practicable, construction activities may proceed and can include destruction of saguaros, provided that they are inspected and determined to not be in current use for CFPO nesting. If a saguaro must be destroyed, the Permittee will plant three saguaros (minimum of 12 feet tall) as replacements.

- Within the Project area, if inspected trees or saguaros are not being used for nesting by CFPOs, construction may proceed. Following inspections with negative results (no CFPO detection), the Permittee will require the developer and/or lot owner to cover the inspected cavities with wire mesh or other appropriate material to preclude use of the cavities by CFPO until grading and construction activities have ceased. All cover material will be removed at the completion of building activities. Materials used to cover cavities will be placed in a manner that does not injure the plant.

7.2.1 Pygmy-Owl Conservation

7.2.1.1 General Conservation Measures

The Project has been configured in full compliance with the guidelines outlined in the USFWS Pygmy-Owl Land Owner Guidance document and the Draft CFPO Recovery Plan. Approximately 409 acres of xeroriparian wash and upland habitat on the Property will be permanent open space in a dedicated Reserve. The Project has been developed in order to avoid, to the maximum extent possible, the portions of the Property historically and currently occupied by CFPOs. The occupancy information was provided to the Applicant by the USFWS and AGFD. The undeveloped Reserve will allow for continued use of the Property by existing CFPOs and provide additional potential habitat to allow for future dispersal and potential occupancy by other CFPOs. This effort will be enhanced by the implementation of the Residential Development Landscape Theme of the Project. The overall goal of landscaping on the Property will be to maintain a desert theme, incorporating plant materials indigenous to, and blending in with, the Sonoran Desert. Natural buffers will be maintained along all roadways abutting and within the Property.

Natural buffers will be maintained along the perimeter of the development pods and lot lines adjacent to the Reserve, maximizing the conservation value of the Reserve.

Development of the Project will be phased. Build out will not be completed for several years. There is the possibility that CFPOs may move into the Project area. To determine whether CFPOs have moved onto or adjacent to a planned new construction phase, protocol surveys will be conducted (using the USFWS approved survey protocol in effect at the time of such activity) prior to initiating salvaging, clearing, or construction activities. Surveys will be conducted on all suitable habitat of the Property. If vegetation disturbance activities within the Project area have not been completed prior to January 1 of any given year, CFPO surveys will be conducted the following survey season according to protocol approved by USFWS. The USFWS, in coordination with AGFD and the Permittee's Environmental Consultant, will determine whether a CFPO activity center or nest site exists and whether a change in status (i.e., abandonment) is appropriate, using the best available information, including survey detection and telemetry data (if available), and other monitoring information. The USFWS believes protocol surveys and monitoring should be completed over a period of several consecutive years with no detections prior to considering any change in status (i.e., abandonment) of a site. The USFWS will also consider the amount of suitable habitat within detected CFPO home ranges and any changes in the landscape in this assessment.

This HCP incorporates specific conservation measures to guide development in the event that a CFPO nest site or territory center is detected within 600 meters of the Project. Certain levels of construction can occur within each of these zones without resulting in a situation that reaches the level of effect not already considered in the analysis of potential Project impacts. In the below specific scenarios, continued construction activities would not harm or harass a CFPO as defined by the ESA regulations.

In the event that a CFPO enters the Project area during construction and establishes a territory or nest site, qualified biologists retained by the Permittee will be called upon to assess the situation. If it is determined by the USFWS that the arriving CFPO has established a territory, the Permittee will temporarily avoid activities in the vicinity of the nest or activity center and consult the USFWS. A dispersing pygmy-owl that has been determined to occupy an area for two weeks or more shall be considered to have established a territory (AGFD, pers. comm.). The level of development activity in the vicinity of a new CFPO territory or activity center will vary depending on the distance between CFPO site and the planned development. The presumed territory has been divided into four zones based upon the degree of proximity to the CFPO site.

ZONE I – 0-100 Meters from the CFPO Activity Center

- There shall be no removal of active nest sites and no land clearing activity within a 100-meter (330 foot) radius of a currently

occupied new CFPO nest or resident CFPO activity center at any time.

- Construction-related activities may continue on lands that have already been cleared of vegetation provided that they do not exceed the levels/intensity of activity that was occurring during the period of time that the CFPO territory was established.

- Activities that would be more intense or cause greater levels of noise disturbance than were occurring during the period of time that the territory was established cannot proceed during the CFPO breeding season (February 1 through July 31).

ZONE II – 100-400 Meters from the CFPO Activity Center

- No additional clearing of vegetation will be permitted during the CFPO breeding season (February 1 through July 31).

- No restrictions on the nature or type of construction activity outside of the CFPO breeding season (August 1 through January 31) provided it is consistent with the approved HCP and IA.

- Construction activities during the CFPO breeding season (February 1 to July 31) cannot exceed the levels or intensity of activity that occurred at the time the CFPO territory was established.

ZONE III – 400 to 600 Meters from the CFPO Activity Center

- No additional clearing of vegetation will be permitted during the CFPO breeding season (February 1 through July 31) without USFWS approval.

- No restrictions on the levels or intensity of construction activity (excluding the clearing of vegetation) at any time of the year provided it is consistent with the approved HCP and IA.

ZONE IV – Greater than 600 Meters from the CFPO Activity Center

- No restrictions. Any activity consistent with the Project description provided in this HCP and the approved IA is allowed.

In addition to the above, in the event that a pair of CFPO establishes a breeding territory within the 100 meters of an area on the Property scheduled for construction, a 280-acre breeding territory will be designated. This 280-acre territory will be circular with the centroid being the nest or activity center. Because construction may need to be redesigned to accommodate a breeding pair of owls, the Permittee will be allowed to increase construction by one and one-half acres for every one acre that needs to be adjusted. Development within the Project boundary may not exceed 22%.

The Permittee will adhere to the following conservation guidelines:

- Promoting connectivity to allow for movement within CFPO home ranges, between CFPO sites and adjacent suitable habitat and on-site open space.

- Monitoring development activities within the home range of a newly arrived CFPO, and conservation measures identified in this HCP, to ensure compliance with the terms and conditions of this HCP and the IA.

- Only directional and low intensity lights will be used within 100 meters (330 feet) of a new nest site or activity center to minimize potential adverse effects to resident CFPOs.

- The Permittee will provide educational information to construction crews for all new grading or construction activity. The purpose of the educational information is to inform crews of these terms and conditions, to minimize disturbances to CFPOs, and to ensure job site perimeters are maintained.

- The Permittee will conduct public education and awareness programs for residents within and adjacent to the Property and develop measures that reduce or eliminate free-roaming cats to minimize potential adverse effects to CFPOs.

- The Permittee will require adherence to the Reserve Management Plan (RMP), which addresses acceptable and prohibited uses and management actions. Vegetation disturbance and other activities (e.g., ORV, motorbike use/racing, firearm target practicing, jeep tours, and application of insecticides and herbicides, etc.) that might significantly degrade CFPO habitat shall be restricted within the Reserve.

- Land clearing, heavy equipment operation, and all other construction related activities would be limited to the Project area. No construction related activities, personnel, or equipment would be allowed into the Reserve. Silt fence will be installed and maintained around the perimeter of the Project area in order to delineate the approved construction boundaries.

- The Permittee will employ an on-site monitor during construction in order to ensure compliance with the terms and conditions of this HCP and the ITP.

- Pet restrictions will be put in place for all residences in the Project as homeowner resolutions in order to guard against possible mortality to CFPO, their prey species, and other wildlife. Dogs will be kept under control or leashed at all times. Residents of the Project will be strictly prohibited from keeping free roaming cats.

7.2.2 Plant Salvage Plan

The Permittee will commission a Native Plant Salvage Plan. This plan will conform to all applicable state, county, and local regulations.

7.2.3 Environmental Compliance Monitors

Environmental Compliance Monitors (ECMs) will be present on the Project area during the clearing, grading, and construction phase of the Project. These ECMs will have the authority to ensure that the Project is executed in compliance with all environmental regulations and permit conditions. Specific responsibilities of the ECMs will include, but are not limited to the following:

a. Ensure that all construction management personnel have attended the environmental training session;
b. Prevent any unauthorized encroachment into the Reserve;
c. Monitor all construction activities;
d. Provide relevant biological information and assistance to construction personnel; and
e. Report any instances of non-compliance with environmental regulations.

7.3 Monitoring and Reporting

The Permittee (or the Reserve management entity as provided in this section) will adhere to the following monitoring and reporting requirements.

- By February 1 of each year for the life of the ITP, the Permittee or Reserve management entity will submit an annual written report describing the activities of the Permittee and the Reserve management entity (or other pertinent parties) required by the HCP, this Agreement, or the ITP and an analysis of whether the terms of the HCP, this Agreement, and the ITP were met for the reporting period. The report shall provide all reasonably available data regarding the status of activities (e.g., CFPO surveys, ongoing and completed construction phases, etc.), any incidental take of CFPO, and, where required by the USFWS, any known changes to the overall population of CFPO that occurred in or immediately adjacent to the Property during the reporting period. In addition, the Permittee will seek technical assistance from the USFWS in implementing these terms and conditions in a manner most effective for minimizing CFPO impacts. In the case of a corporate Permittee, the report shall also include the following certification from a responsible company official who supervised or directed the preparation of the report:

  Under penalty of law, I certify that, to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of this report, the information submitted is true, accurate, and complete.

- Pre-construction presence/absence surveys for the CFPO will be conducted on the Property according to established protocol.

- On-site monitoring of the Project according to established protocol, during the clearing, grading, and construction phase of the Project (section 7.2.3).

- Compliance and effect/effectiveness monitoring and reporting requirements that are part of this HCP for the Project are summarized below. All reports will be sent

annually on January 1 to the Field Supervisor of the USFWS Ecological Services Field Office, Phoenix, Arizona. Failure by the Permittee to file a report is not a breach of this HCP unless and until either: 1) it is an intentional omission; or 2) after notification by the USFWS of the failure, the Permittee does not respond within 30 days.

- Cavity Inspection Reports. The Permittee will be required to submit any necessary nest-cavity inspection reports within ten days of completion of fieldwork to the USFWS Arizona Ecological Services Field Office.

- Mortality Reports. Upon locating a dead, injured, or sick CFPO, or any other endangered or threatened species, the Permittee is required to contact the USFWS Law Enforcement Office in Mesa, Arizona (480) 835-8289, for care and disposition instructions. Extreme care should be taken in handling sick or injured individuals to ensure effective and proper treatment. Care should also be taken in handling dead specimens to preserve biological materials in the best possible state for analysis of cause of death. In conjunction with the care of sick or injured endangered/threatened species, or preservation of biological materials from a dead specimen, the Permittee and his contractor/subcontractor have the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

- Annual surveys during the five-year term of this HCP corresponding to the construction phase of the Project, the Permittee will conduct annual surveys on the entire Property using current survey protocol. The Permittee will be responsible for funding these surveys. Personnel will conduct all surveys with appropriate survey permits from the USFWS. Should any pygmy-owl be detected during these surveys, the Permittee will notify the USFWS as required under the conditions of the surveyor's permit to conduct survey.

  Should a CFPO be detected, a more in-depth monitoring effort may be implemented at the USFWS's discretion. Prior to initiating these surveys the USFWS will coordinate with the Permittee to ensure that there is no conflict between the telemetry protocol and the Permittee's activities on the Property. The Permittee will fund this telemetry effort at up to $1,000 per bird for up to five birds. The total potential maximum commitment of funds by the Permittee for follow-up survey/telemetry is a total of $5,000. All telemetry activities within the Property will be conducted in the presence of a qualified biologist retained by the Permittee. The Permittee's obligation to fund telemetry studies will cease within one year of completion of build-out, or upon the expiration date of the ITP, whichever occurs first. On a confidential basis, a copy of the telemetry results will be provided to the Permittee. The Permittee will not release this information to the public or otherwise make it available without the prior written consent of the USFWS. The Permittee's responsibility for funding telemetry studies is triggered by CFPO detection on or immediately adjacent (within 600 meters) to the Property.

  If it is determined that a CFPO has established an active breeding territory on the Property, the Permittee will provide funding for AGFD to intensively monitor the activities of the breeding pair. The Permittee will provide up to $15,000 for this effort. It is hoped this intensive monitoring will provide the scientific community with valuable information regarding CFPO breeding productivity, foraging ecology, habitat use, and time activity budgets. The collection and analysis of this information will aid in the conservation and recovery of CFPO. All monitoring activities within the Property will be conducted in cooperation with a biological consultant retained by the

Permittee. On a confidential basis, a copy of the monitoring results will be provided to the Permittee. The Permittee will not release this information to the public or otherwise make it available without the prior written consent of the USFWS. The Permittee's responsibility for funding intensive monitoring studies is triggered by the detection of an active CFPO breeding territory on the Property. The Permittee's obligation to fund monitoring studies will cease within one year of completion of build-out, or upon the expiration date of the ITP, whichever occurs first.

Prior to any Project construction activities (which include, but are not limited to, residential areas, roads, water, sewer/septic, gas, telephone, cable TV, electric, and common use areas and facilities) that involve the clearing of vegetation during the CFPO nesting period (February 1 to July 31), all saguaros greater than eight feet in height and all trees greater than six inches dbh[1] that occur within the proposed grading limits will be inspected to determine if they are being used as a nest site by CFPO. If a tree or saguaro is being used as a CFPO nest site, construction activities will be curtailed within a 100-400 meter radius of the nest cavity until after the nesting period. There shall be no removal of CFPO nest sites and no land clearing activity within a 100-meter (330 foot) radius of a currently occupied new CFPO nest or activity center at any time. Construction-related activities within 100-400 meters may continue on lands that have already been cleared of vegetation provided that they do not exceed the levels/intensity of activity that was occurring during the period of time that the CFPO territory was established. Activities within that area that would be more intense or cause greater levels of noise disturbance than were occurring during the period of time that the territory was established cannot proceed during the CFPO breeding season.

All inspections will be conducted by a qualified biologist who has obtained a permit from the USFWS to conduct inspections of potential CFPO nest sites.

The cavity inspection requirements will only apply to construction that is commenced during the CFPO nesting period. No cavity inspection will be required for construction commenced outside of the CFPO nesting period.

After its selection, the Reserve management entity shall be solely responsible for the surveying, monitoring, and reporting requirements of this HCP applicable to the Reserve. Upon the concurrence of the USFWS, the Reserve management entity may fulfill the same requirements applicable to the area of the Project.

7.4 Saguaro Protection

If practicable, saguaros will be preserved in place. If it is not practicable to preserve saguaros in place and if the saguaro is salvageable, it will be transplanted to an appropriate location. The Permittee will make every reasonable effort to preserve saguaros in place. The USFWS will be notified prior to the removal of saguaros and potential nest trees and given the opportunity to inspect them prior to removal. The USFWS will have 15 days subsequent to notification to conduct their inspection. All USFWS inspections will be conducted in the presence of a qualified biologist retained by the Permittee.

[1] Diameter at breast height (dbh) is defined as the stem diameter 4.5 feet above the ground surface. Six inches dbh is the minimum tree-stem size that will require inspection. Multiple-stem trees that do not have a single stem greater that six inches dbh are excluded from this requirement.

7.5 Duration and Funding in the HCP

The duration of the ITP is for five (5) years. The Permittee will provide funds necessary to manage the Reserve and implement the HCP in perpetuity. Until the Reserve management entity is selected and a RMP is adopted pursuant to the HCP and the IA, the Permittee will provide such funds on an annual basis. As part of its yearly budget cycle, the Permittee will estimate the costs of projects and programs called for in the HCP. The USFWS will review annual activities and budget estimates. Funding allocations will be based on estimated costs of activities to be implemented in the coming year. Examples of HCP compliance costs include fencing, trespass control, education, trail design, erosion control, fire management, and wildlife management. In addition to the costs included in the annual management budget that will fund most of the required activities, the Permittee will pay the costs associated with the recurring elements such as monitoring (including the costs of telemetry and more intensive monitoring upon detection of a CFPO, or determination that a CFPO has established an active breeding territory, on the Property as set forth in section 7.3), reporting, and consultation with the USFWS, and with non-recurring elements such as CFPO adaptive management changes and changed circumstances.

Promptly, should the ITP be issued, the Permittee will erect a fence around the Reserve and provide construction of safeguards (silt fence) around these portions of the Reserve adjacent to the Project area where development will occur. The estimated cost of the fencing and safeguards is approximately $40,000. The amount of the remaining costs to be paid directly by the Permittee on an annual basis will depend on the length of time required to select the Reserve management entity and adopt the RMP.

Once the Reserve management entity is selected and the RMP is adopted, the Permittee will establish an endowment for the operation, management, and monitoring of the Reserve as provided for by the HCP and the RMP in perpetuity.

The amounts of the annual funding and the endowment will be submitted by the Permittee for review by the USFWS.

8.0 RESPONSE TO ISSUANCE CRITERIA

The Applicant responds specifically to the issuance criteria identified in the USFWS's Endangered Species HCP Handbook (November 1996).

8.1 General Criteria

The Applicant believes and asserts that it does not fall under any of the five general criteria identified in the HCP guidelines that would prevent the USFWS from issuing an ITP. Specifically:

1. Exeter has not been assessed a civil penalty nor has it been convicted of any criminal provision of any statute or regulation relating to the activities for which the application for the ITP is filed.

2. Exeter has disclosed all material information and has not made false statements as to any material fact in connection with the application.

3. Exeter believes that it has demonstrated a valid justification for the ITP and a showing of responsibility.

4. Exeter and its Consultants believe the requested authorization does not threaten a wildlife or plant population.

5. Exeter is certain that the USFWS will not find that Exeter is disqualified from receiving an ITP.

8.2 Specific Criteria

A. The Taking Will Be Incidental.

Exeter believes that any taking that may occur as a result of the Project would be incidental to permitted and lawful activities associated with construction of the Project.

B. The Permittee will, to the Maximum Extent Practicable, Avoid, Minimize, and Mitigate the Impacts of Any Incidental Taking.

Exeter, through this HCP, IA, and ITP, believes that to the extent practicable the mitigation program will minimize and mitigate the impacts of any harm or harassment of non-breeding CFPOs and the loss of habitat resulting from project implementation and avoid the effects to breeding CFPOs that may establish within the project area.

C. The Permittee will ensure that adequate funding for the HCP and any Changed Circumstances will be provided. A PAR analysis will be completed by the Permittee to estimate the needed funding to implement the HCP until a RMP is complete and budgeted to the satisfaction of the Permittee and USFWS. Unforeseen Circumstances have been addressed within the EA/HCP under section 6.0 and section 10.0. If unforeseen circumstances do occur, the Permittee will work in good faith with the USFWS to determine the best course of action.

D. The Taking Will Not Appreciably Reduce the Likelihood of Survival and Recovery of the Species in the Wild.

Exeter and its consultants believe that the Project will remove potential CFPO habitat that has shown no evidence of CFPO occupancy during recent surveys. Exeter believes that the protection of the mitigation lands (Reserve) will contribute a net benefit to the survival and recovery of the CFPO.

E. The Permittee Will Ensure That Other Reasonable Measures That the Director May Require as Being Necessary or Appropriate Will be Provided.

"Other reasonable measures" are not identified at this time. Exeter believes that the dedication of 80% of the potential and occupied CFPO habitat on the Property will preclude the need for other measures.

F. The Director is Assured the Conservation Plan Will Be Implemented.

Exeter believes that the terms and remedies of the HCP and IA executed between the Permittee and the USFWS will ensure that the HCP will be implemented.

9.0 AMENDMENT PROCESS

All potential amendment requests to the IA, ITP, and/or HCP must be in writing to and approved by the USFWS. Amendments would be required for any change in the following: 1) significant revision of the Property, Project, or Reserve boundaries; 2) any change in the status of species, including listing or downlisting of a species covered by this HCP, changes not addressed in this HCP, or inclusion of a newly listed species, which may be affected by the Project but not addressed in this HCP; or 3) significant modification of any important mitigation component under the HCP.

9.1 Amendment Procedure

It is necessary to establish a procedure whereby the HCP, ITP, or IA may be amended. However, it is extremely important that the cumulative effect of amendments will not jeopardize any T&E species or other species of concern. Amendments must be evaluated based on their effect on the habitat as a whole. USFWS must be consulted on all proposed amendments. The types of proposed amendments and the applicable amendment procedures are briefly described below.

9.2 Amendments to Locally Approved Development Plans

It is acknowledged that upon the written request of the Permittee, the local agency having land use regulatory jurisdiction is authorized in accordance with applicable law to approve amendments to development plans for the Project that do not encroach on any T&E species' habitat that is not presently contemplated to be disturbed as a consequence of the development, and that do not alter the conditions set forth in the HCP, ITP, or IA.

9.3 Minor Amendments to the HCP

Minor amendments involve routine administrative revisions or changes to the operation and management program and which do not diminish the level or means of mitigation. Such minor amendments do not alter the terms of the ITP.

Upon the written request of the Permittee, USFWS is authorized to approve any minor amendments to the HCP, ITP, or IA upon information notice sent to the parties of the IA if the amendment does not conflict with the primary purpose of this HCP as stated in sections 1.0 and 2.0.

9.4 All Other Amendments

All other amendments will be considered an amendment to the HCP, ITP, or IA subject to any other procedural requirements of federal law or regulation, which may be applicable to amendment of such documents. Such amendments would be subject to NEPA notification for public review and comment and additional analysis by USFWS pursuant to section 7 of the ESA.

10.0 CHANGED CIRCUMSTANCES

10.1 Newly Listed Species

Species not currently listed as threatened or endangered under the ESA could be added to the list during the five (5) year life of the ITP and addressed in this HCP by a major amendment.

10.2 Vandalism

The risk of vandalism to the Reserve will be mitigated by the installation and maintenance of a fence around the Reserve that will restrict vehicle and unauthorized pedestrian access. Any vandalism that occurs on the Property during the life of the ITP will be reported to the appropriate law enforcement agency by the Permittee or the Reserve management entity.

10.3 Fire

During the life of the ITP, if a fire occurs on the Property, it will be immediately reported to the appropriate fire control agency by the Permittee or the Reserve management entity. A report will also be made to the USFWS; and the Permittee or Reserve manager will provide the USFWS with a fire impact assessment.

10.4 Exotic Plants and Animals

During the life of the ITP, any exotic plants and animals encountered on the Reserve will be reported to the USFWS by the Permittee or the Reserve management entity

10.5 Drought

Drought is a regular occurrence in the arid southwest and is beyond the control of the Permittee.

10.6 Flood

Flooding is an infrequent occurrence in the arid southwest and is beyond the control of the Permittee.

10.7 Disturbance of Resident CFPO

Any deliberate human disturbance of CFPO not authorized by this HCP and the ITP, or by the USFWS or AGFD, that may occur on the Property during the life of the ITP may violate section 9 of the ESA. Any observed or reported interaction with CFPO on the Property will be immediately reported to USFWS law enforcement officials by the Permittee or the Reserve management entity.

10.8 Disease

Any outbreak of disease afflicting CFPO or other wildlife species observed or suspected will be immediately reported to the USFWS by the Permittee or the Reserve management entity.

11.0 NO SURPRISES ASSURANCES

In the event that any judicial decision or determination, including without limitation the decision from the District Court for the District of Columbia in *Spirit of the Sage, et al v. Norton, et al, 98-CV-1873 (D.D.C. 2003)*, may hold that the Department of the Interior's "No Surprises" assurances rule (or similar successive rule) is vacated, unenforceable or enjoined for any reason or to any extent, the terms containing "No Surprises" assurances in this HCP [including this section and the footnote on page 52 section 2 (a)], the IA [including section 11.3, "Changed Circumstances" section 11.3.a (1), (2), and (3)], and the ITP shall be enforceable only to the degree allowed by any such decision or determination; provided that the remainder of the ITP, HCP, and IA shall remain in full force and effect to the maximum extent permitted by law. In the event that the "No Surprises" assurances rule may be vacated, unenforceable or enjoined by such decision or determination but is later reinstated, the "No Surprises" assurances set forth in this HCP, the IA, and the ITP shall likewise be automatically reinstated and apply to the entire term of this HCP. If, in response to any such judicial decision or determination, the "No Surprises" assurances rule is revised, the "No Surprises" assurances set forth in this HCP, the ITA, and the ITP shall be automatically amended in a manner consistent with the revised rule so as to afford the maximum protection to the Applicant consistent with the revised rule.

Unforeseen circumstances are discussed in the Department of the Interior's "Habitat Conservation Plan Assurances ("No Surprises") Final Rule" (63 Federal Register 8859 [February 23,1998]). Pursuant to the provisions of the "No Surprises" assurances, in the event unforeseen or extraordinary circumstances that affect a species covered by this HCP occur, the Permittee will not be required to provide additional mitigation which requires the commitment of additional lands, additional financial compensation, or additional restrictions on lands or other natural resources released for development use. However, the Permittee agrees to cooperate with the USFWS in adjusting avoidance and minimization measures or monitoring and reporting requirements, as appropriate, should unforeseen circumstances arise. Currently, the "Covered Species" in this HCP is the CFPO. This is the only species adequately covered under this HCP and will, therefore, be covered by the "No Surprises" rule assurances.

12.0 PUBLIC AGENCY COORDINATION AND ACKNOWLEDGEMENTS

The following agencies, organizations, and individuals were consulted or coordinated with during the process of addressing endangered species concerns for the Skyranch incidental take permit application:

- The Town of Marana
- U.S. Fish and Wildlife Service
- Arizona Game and Fish Department, Research Branch

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APPENDIX A

SKYRANCH SPECIFIC PLAN

SKYRANCH SPECIFIC PLAN

MAY 2011

SKYRANCH

Development Capability Report

Town of Marana

Southwest Corner of Tangerine Road and Thornydale

Prepared for:
Town of Marana
Planning and Zoning
3696 W. Orange Grove Road
Tucson, Arizona 85653

Project applicant:
Stellar Homes
11101 N. Poinsettia Drive
Oro Valley, Arizona 85737

Prepared by:
The Planning Center
110 S. Church, Suite 1260
Tucson, Arizona 85701
Ph. (520) 623-6146
Fax (520) 622-1950

With Assistance From:
Walbert Baker Associates
CMG Drainage
Olsen and Associates

May 2001

For Clarification of Material
Contained in this Report
Contact:

THE PLANNING CENTER
110 S. Church Street, Suite 1260
Tucson, AZ 85701
Telephone (520) 623-6146
Fax (520) 622-1950

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INTRODUCTION

SKYRANCH Specific Plan is a master planned development located in northeast Marana. In total, the Specific Plan Area includes approximately 515 acres tied together by a unique residential community that complements surrounding land uses and protects significant portions of the site for conservation

The SKYRANCH Specific Plan site currently falls into two jurisdictions: the Town of Marana currently has jurisdiction over approximately 511.28 acres, while Pima County has jurisdiction over approxrmately 5.51 acres located in the northeast corner of the site. Annexation into the Town of Marana of the 5.51acre parcel is in process and the development regulations and policies set forth in this Specific Plan shall apply to it upon annexation. Exhibit I.A.1: Location and Vicinity Map distinguishes the lands in the Town of Marana and those lands currently in Pima County that are in the process of annexation into the Town.

SKYRANCH Specific Plan has been organized around the entire 515-acre site for the purposes of planning for the conservation of Pygmy Owl habitat, and the associated allowances for disturbances The approximately 5.51- acre parcel not currently under the Town's jurisdiction shall be designated as open space and restricted from development according to the regulations of this document upon annexation.

Located strategically at the intersection of major transportation corridors, area surrounding the SKYRANCH site is considered one of the fastest growing areas in the Town of Marana. The residential development described in this plan will maximize existing site amenities, and compliment surrounding uses. The occurrence of more than twelve regulatory washes that traverse the site will be incorporated into the design. The Development Plan section of this document will respond to the unique site conditions described in the Site Analysis. Site design and the land use concept proposed in the Development Plan and Development Regulations will complement surrounding uses and leave intact significant portions of the site.

This Development Capability Report is prepared in conformance with Section 05.06.01(D) of the Marana Land Use Code.

Information for the Development Capability Report was compiled from site visits, correspondence with Town, County, and State agencies and officials, as well as topographic and hydrologic analyses.

I. Site Analysis and Inventory

A. EXISTING LAND USES

1. Site Location in Regional Context:

The site is approximately 515 acres, located at the southwest corner of Tangerine Road and Thornydale Road in the Town of Marana (See Exhibit I.A.1: Site Location Map) The total property consists of seven parcels. The parcel numbers are 224-13-004D. 004E. 004F. 004H. 004J. 0020. 0030. They are in Section 06. Township 12 S, Range 13 E.

2. Existing Land Uses on Site:

The property is currently vacant land (See Exhibit I.A.2: Aerial Photo).

3. Surrounding Property within 1/4 Mile Radius:

a. Existing Zoning within ¼ mile of the site. (See Exhibit I.A.3: Existing Zoning).

North: Marana R-144 Zone
Northwest: Marana C, Marana F (Tangerine Hills), Marana R-36
Northeast: Marana R-144, Marana F (Forest City)
East: Pima County SR
West: Town of Marana F (Tangerine Hills). R-36. Pima County SR
South: Town of Marana F (Hartman Hills), Pima County SR
Southwest: Town of Marana F (Hartman Hills), Pima County SR
Southeast: Pima County CR-1 and SR

b. Existing Land Use within ¼ mile of the site. (See Exhibit I.A.4: Existing Land Uses)

North: Single Family Residential, Tucson Water Reservoir, and Vacant Land
East: Undeveloped State Owned Land
West: Single Family Residential
South: Single Family Residential, and Vacant Land

c. Building Heights:

Within one-quarter mile of the site. three homes to the south of the project site are two-story all others are single story.

d Pending Rezonings within ¼ mile:

There are no pending rezonings within ¼ mile of the property.

e. Conditional Rezonings:

There are no conditional rezonings within a ¼ mile of property.

f Subdivisions/Development Plans Approved

The approved Forest City Specific Plan lies just north of Tangerine Road and east of Thornydale Road, and is not adjacent to the property. Tangerine Hills, an approved Specific Plan, is adjacent to the property on the west border south of Tangerine and west of Camino Del Oeste. A portion of the Hartman Hills Specific Plan to the south of Camino Del Norte is adjacent to the property on the south

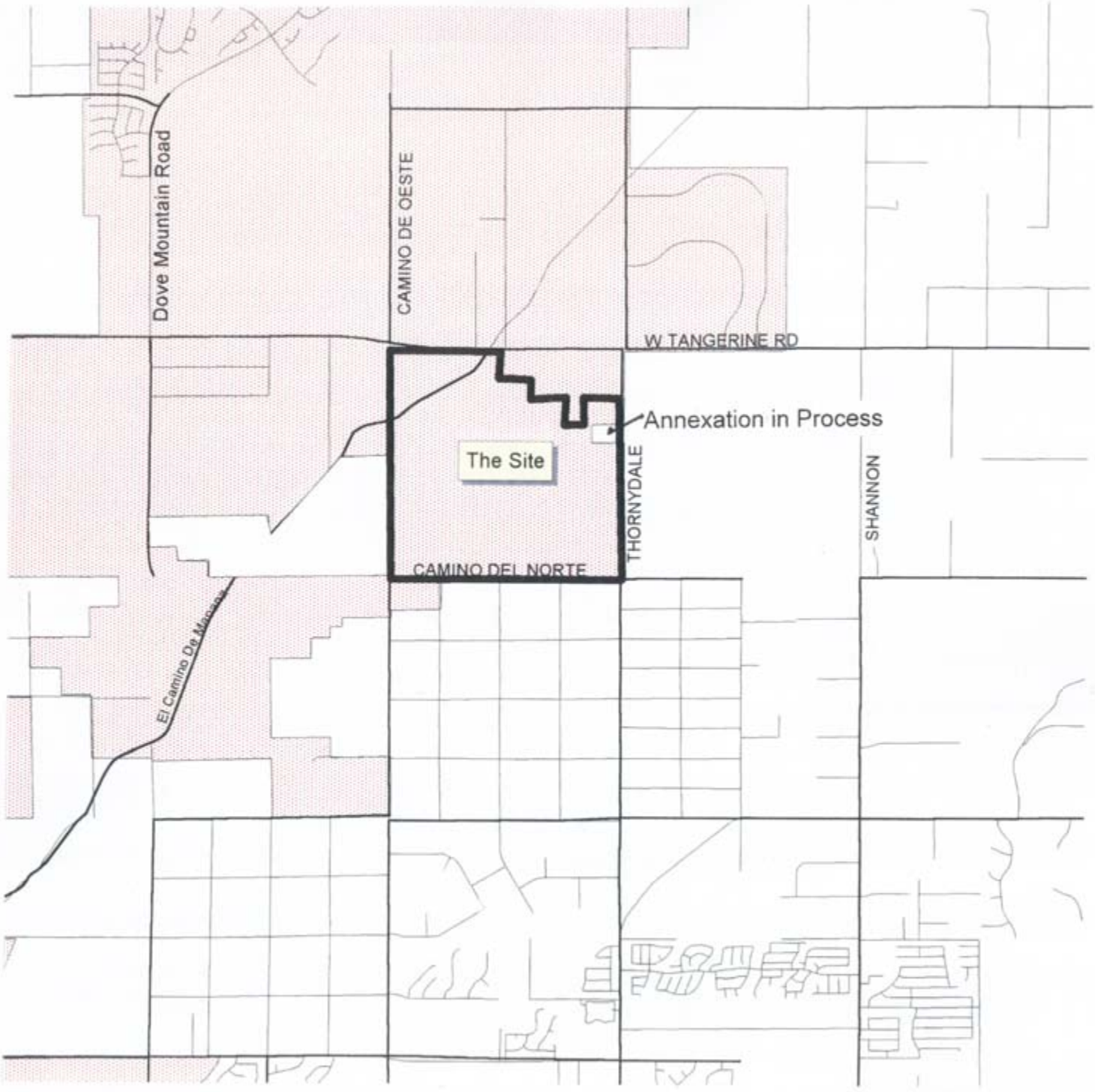
g. Architectural Styles used in Adjacent Projects:

All the homes in the immediate area of this project are custom-built, and as such encompass many architectural styles.

4. Well Sites:

According to records from the Arizona Department of Water Resources (ADWR), there are no wells located on the site, or within 100 feet of the subject property (T12, R13, Section 6).

EXHIBIT I.A.1: Location and Vicinity Map



Site Information:
Size: Approximately 515 acres
T 12S, R 13E, Section 6

Town of Marana

THE PLANNING CENTER

0 1000 2000 Feet

EXHIBIT I.A.2: Aerial Photo

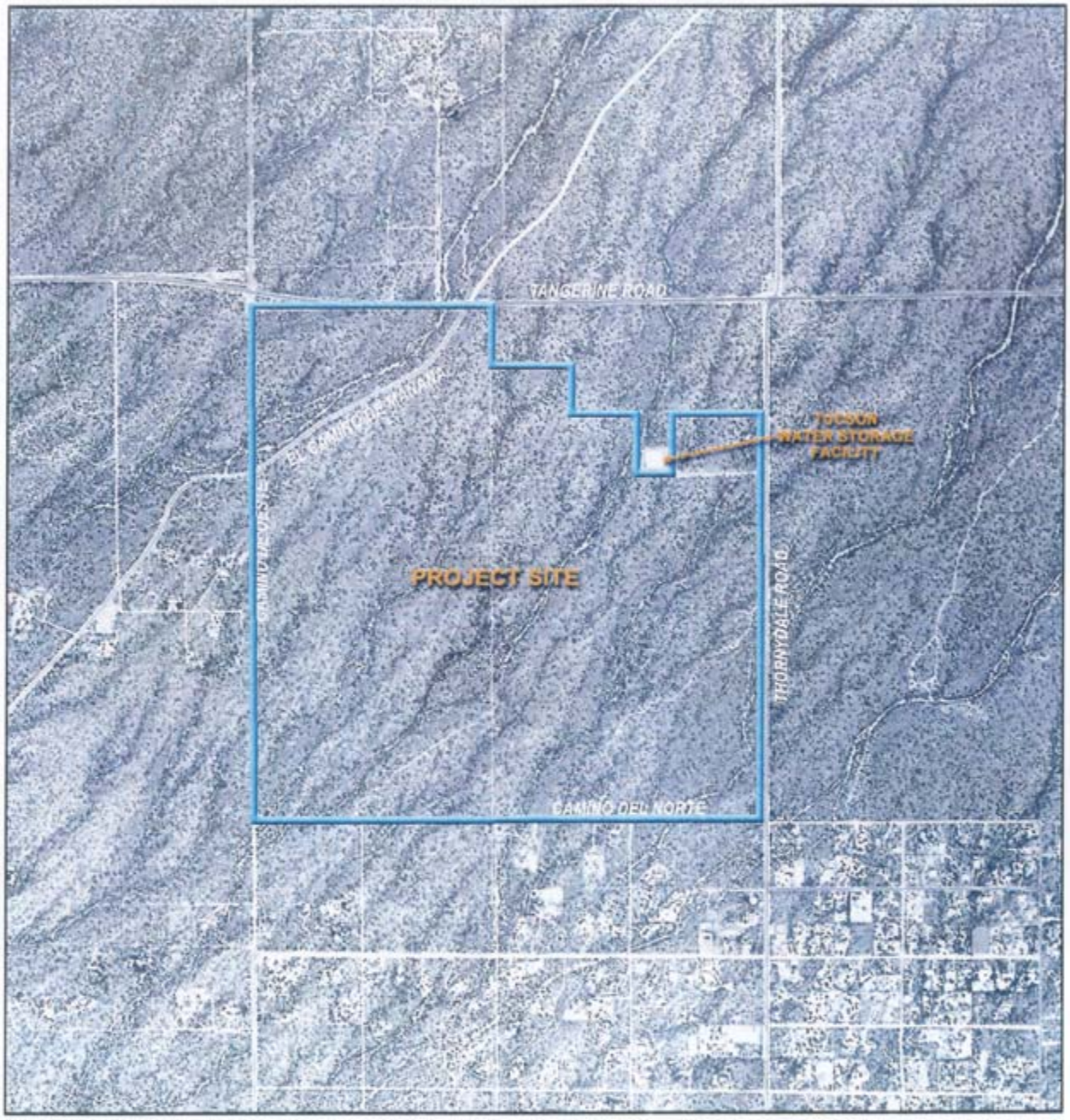
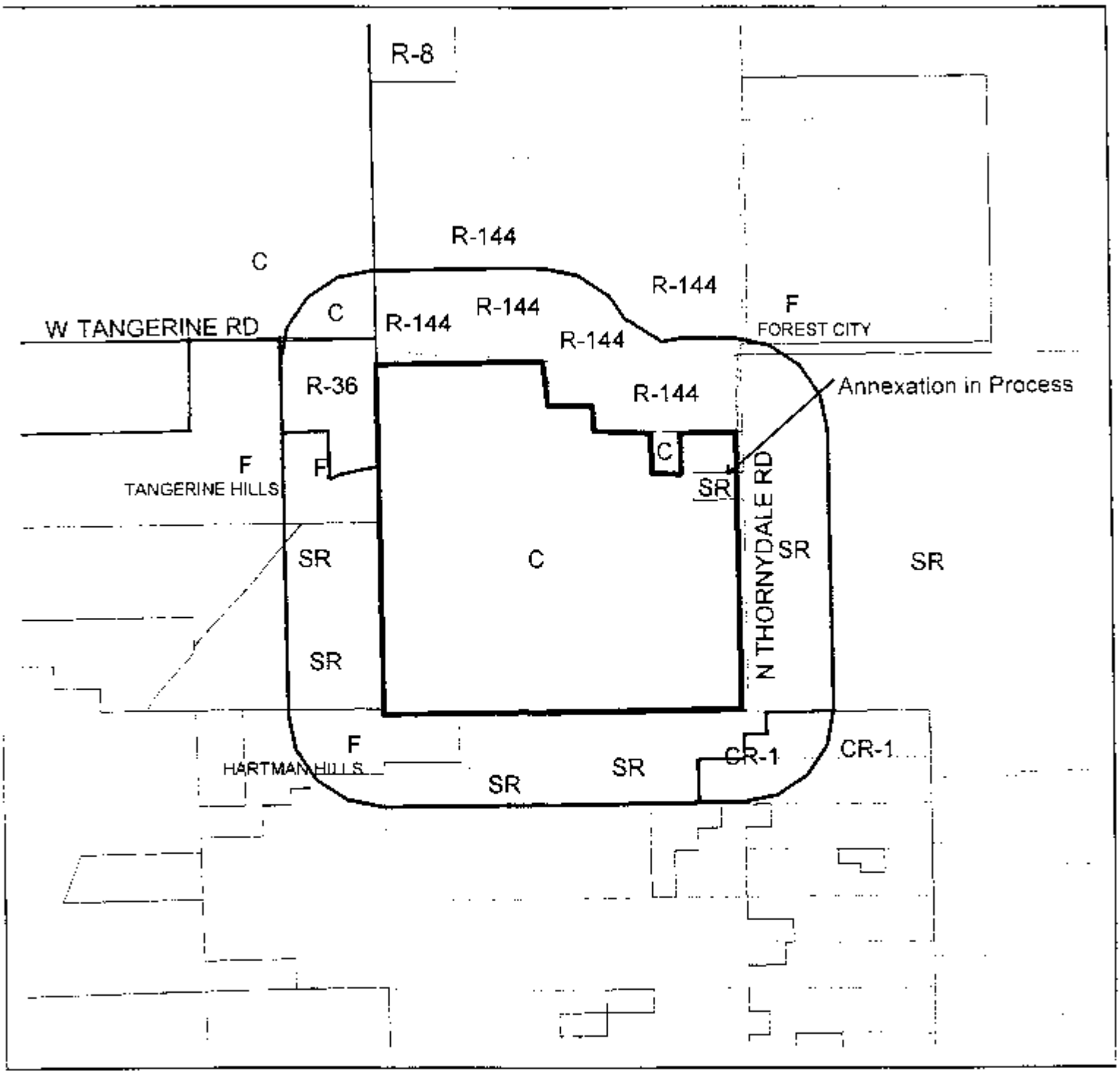


EXHIBIT I.A.3: Existing Zoning



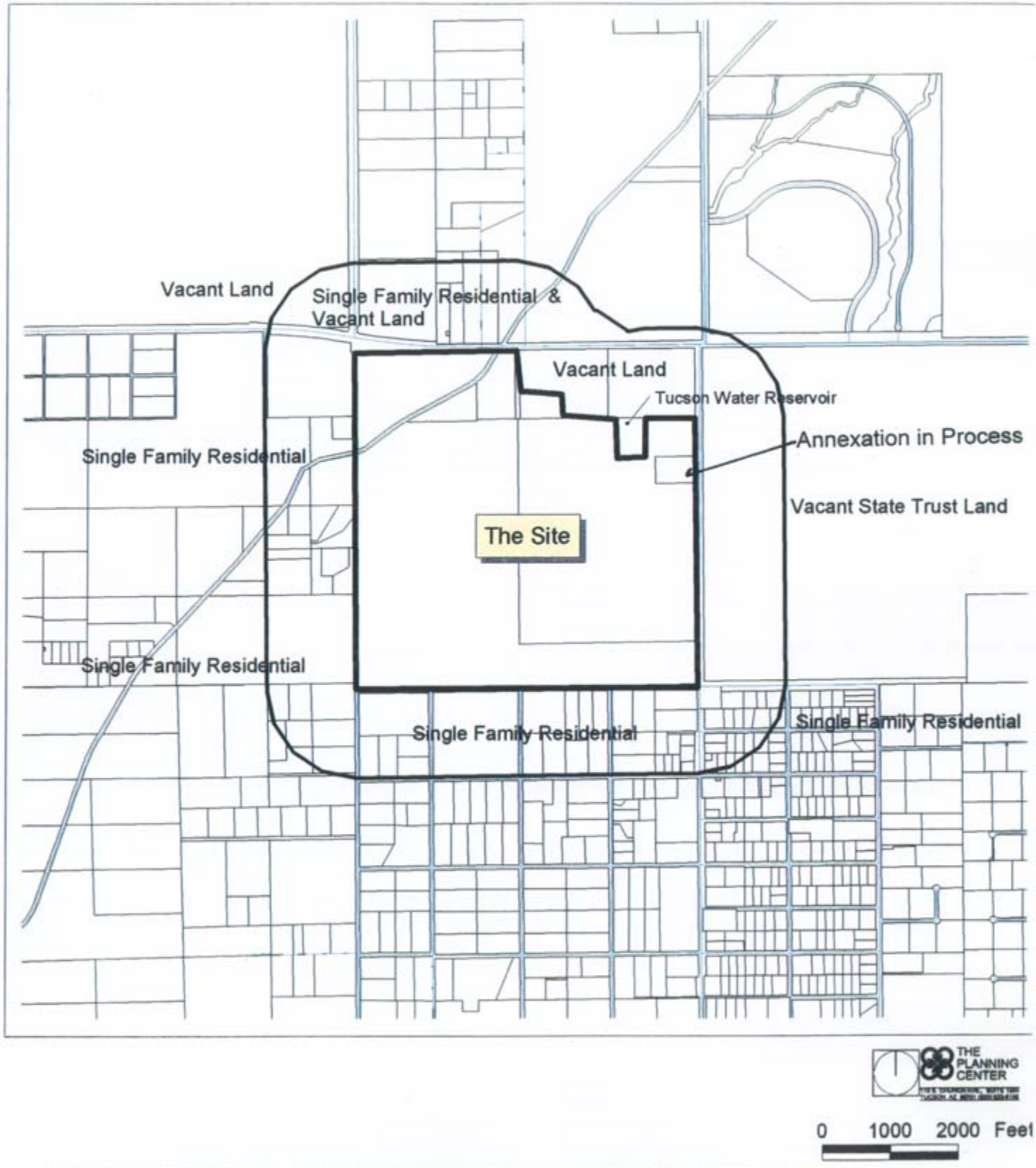
R-144, F, C, and R-36 correspond to Town of Marana Zoning

SR and CR-1 correspond to Pima County Zoning

THE PLANNING CENTER

0 1000 2000 Feet

EXHIBIT I.A.4: Existing Land Use



B. TOPOGRAPHY

1. Topographic Characteristics:

Existing topography at 5' contour intervals is shown on Exhibit I.B.1: Topography.

a. *Hillside Conservation Areas:*

There are no Hillside Conservation areas on the subject property.

b *Rock Outcrops:*

There are no rock outcrops on the subject site.

c. *Slopes of 15% or greater:*

There are no slopes of 15% or greater on the subject site.

d. *Other Significant Topographic Features:*

There are no other significant topographic features such as restricted ridges or peaks affecting the site

2. Pre-development Cross-Slope:

The average cross slope of the property is approximately 5.17%. The formula used to derive the average cross slope is as follows:

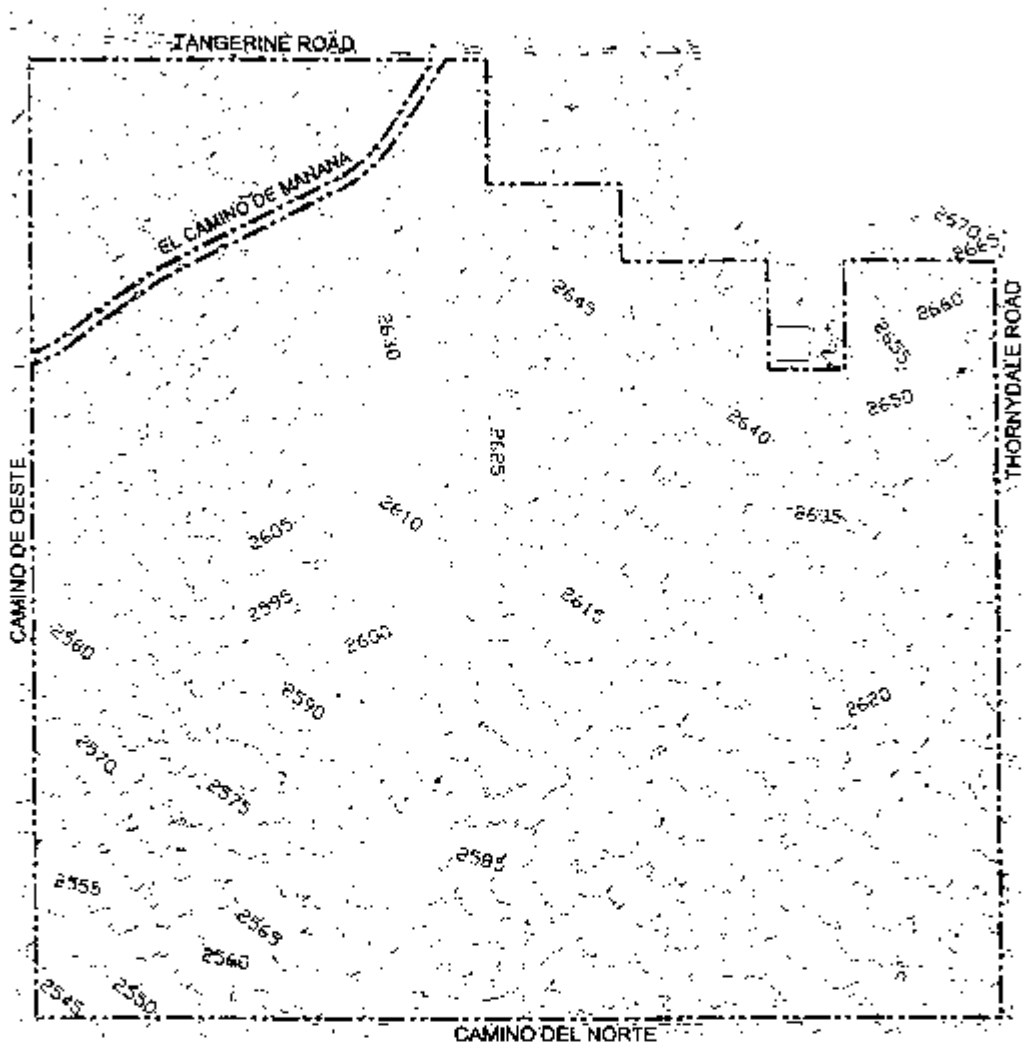
$$\text{Average Cross Slope} = \frac{I \times L \times 0.0023}{A}$$

Where. I = contour interval (10')
L = total length of contours (115,900')
0.0023 = conversion of "square feet" into "acres x 100"
A= total site area in acres (514.79)

$$\text{Average Cross Slope} = \frac{10 \times 115{,}900 \times 0.0023}{514.79}$$

Average Cross Slope = 5.17 %.

EXHIBIT I.B.1: Topography



CONTOUR INTERVAL 5 FT.

THE PLANNING CENTER
110 S. CHURCH AVE., SUITE 1260
TUCSON, AZ. 85701 (520) 623-6148
0' 500' 1000'

C. HYDROLOGY

1. **Offsite Watersheds:** Exhibit 1.C 1: Offsite Hydrology shows the perimeter of all offsite watersheds that affect or are affected by the subject property both upstream and downstream to their logical conclusion. All of the washes that cross the property emanate from the Tortolita Mountain Foothills. The project site is located within a critical basin.

2. **Offsite Features that may affect or be affected by the Site:** There are no significant man-made features within the watersheds affected by or affecting the project site. All of the washes crossing the property exist in a natural condition. Some of these washes have distributary flow patterns where the channels divide into two or more flow paths that later recombine with other channels The channels are generally shallow having depths ranging from 1 to 2 feet. The channel bottoms are comprised of loose, sandy soils and moderate to dense desert vegetation. Runoff is contained within the low-flow channel systems during the more periodic low intensity rainfall events. Large flood flows overtop the banks and spread across broad areas as sheet flow. The largest wash crossing the property is called the Canada Agua West. This wash flows parallel to, and just on the west side of Camino de Manana.

3. **Acreage of Upstream Off-site Watersheds with 100 Year Discharge Greater than 100 cfs:** The area of the upstream offsite watersheds with a 100-year peak discharge rate of 50 cfs or more is given in Table 1. The location of the concentration points for these watersheds is shown on Exhibit 1.C.1.

4. **Onsite Hydrology:**

   a. **On-site drainage flow conditions are characterized by:** The area of the upstream offsite watersheds with a 100-year peak discharge rate of 50 cfs or more is given in Table 1. The location of the concentration points for these watersheds is shown on Exhibit 1.C.1.

   b. **Areas of Sheet Flooding with Average Depth:** Areas within the delineated 100-year floodplain limits that are outside of the low-flow channels can be characterized as sheet flooding zones. The depths of flooding in the sheet flow areas range from 0.5 to 1.0 feet.

   c. ***Federally Mapped Floodways and Floodplains:*** The 100-year floodplain areas for washes with a discharge >50 cfs are shown on Exhibit 1.C 2: On-Site Hydrology. Areas within the delineated 100-year floodplain limits, which are outside of the low-flow channels, can be characterized as sheet flooding zones. The depths of flooding in the sheet flow areas range from 0.5 to 1.0 feet. Exhibit 1.C.2 also shows the federally mapped FEMA floodplain areas (Panel 04019C1015K, February 8, 1999) on the project site. The FEMA floodplain area is designated as a Zone AO with flow depths of 2 feet and a velocity of 6 fps.

d. ***100 year Peak Discharges Exceeding 50 cfs***: The peak discharge rates for all washes having a 100-year event flow >50 cfs are listed in Table 1.

5. Existing Drainage Conditions along Downstream Property Boundary:

Runoff along the downstream property boundary is similar to the flow conditions through the project site. All natural watercourses leave the project site then pass through low-density residential areas along the south and west boundaries of the property. The washes in the areas along the downstream boundary exist in a natural condition and widespread shallow sheet flooding can occur, similar to the conditions on the project site.

Table 1: Hydrology Table

Summary of 100 yr. Q's		
Concentration Point	Q100 (CFS)	Drainage Area (Acres)
1	136	32.3
2	1229	578
3	124	25.7
4	173.3	38.6
5	311.6	83
6	29.5	4.6
7	1223	407
8	169	42.5
9	192	45.5
10	2714	1205
11	635	182
12	64	11
13	192	38.6
14	179	38.6
15	101	18.4
16	514	180
17	1380.5	640
18	233	72
19	643	246
20	1299	667

EXHIBIT I.C.1: Off-Site Hydrology

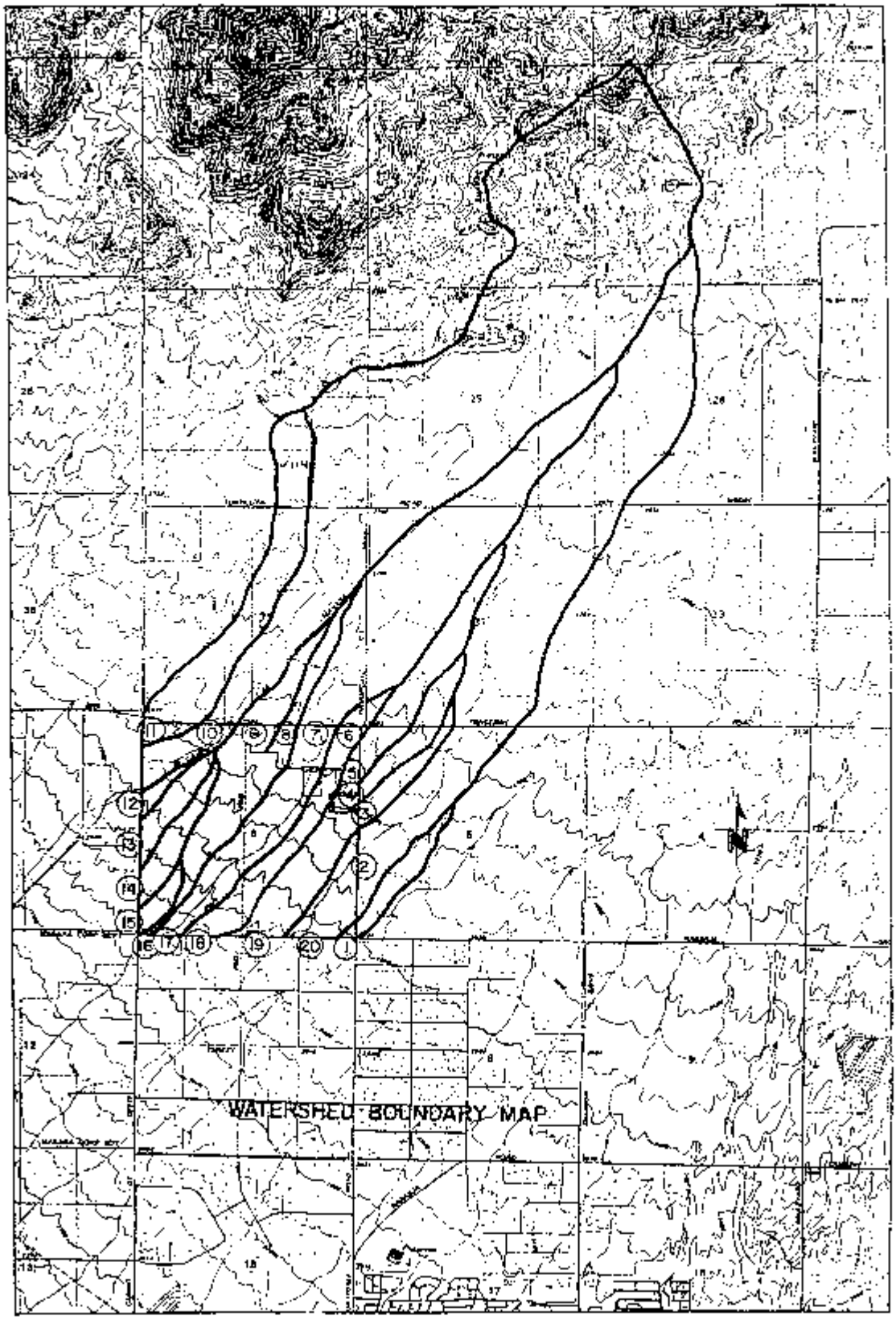
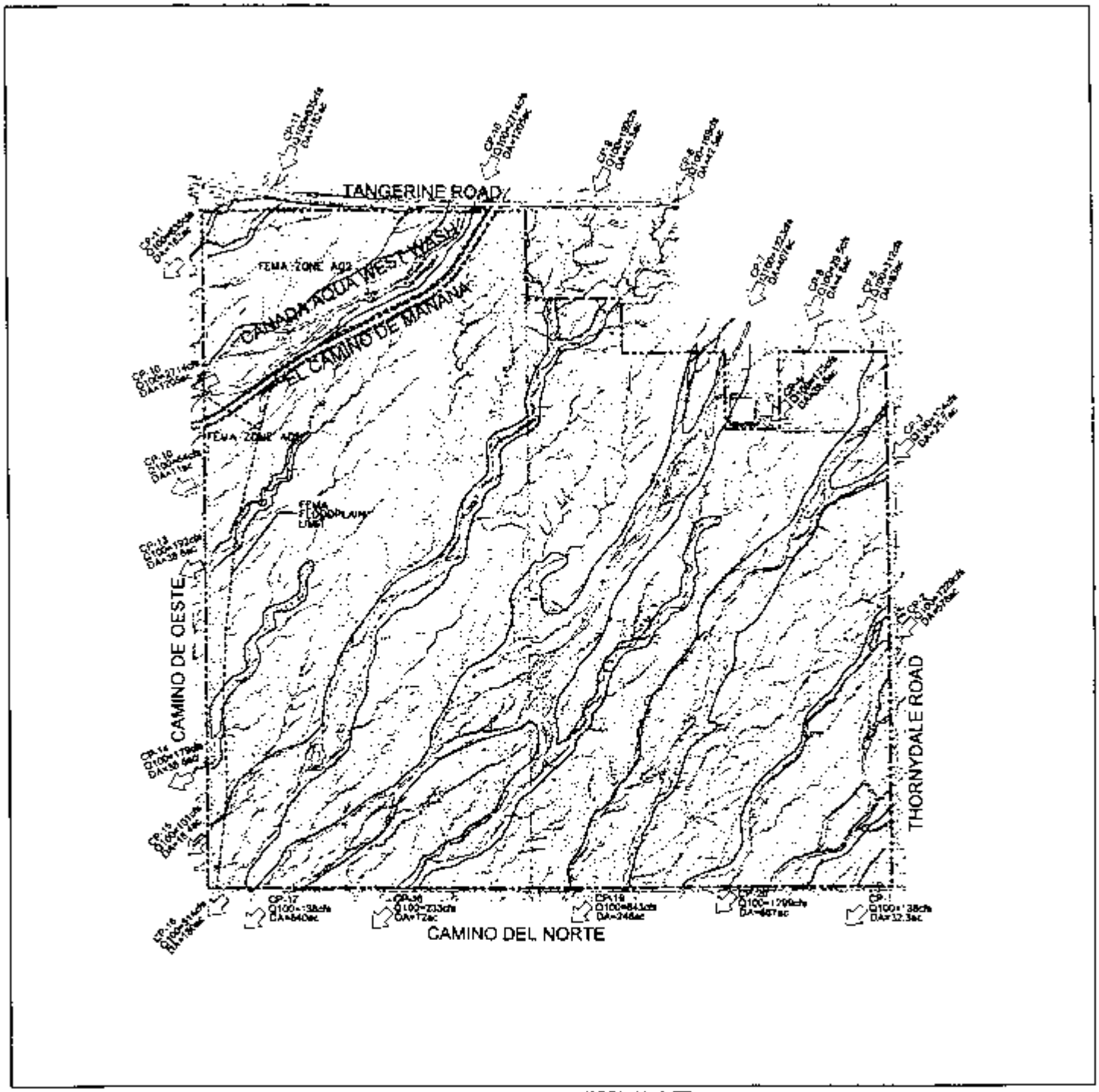


EXHIBIT I.C.2: On-Site Hydrology



CONTOUR INTERVAL 1 FT.

THE PLANNING CENTER

110 E CHURCH AVE SUITE 126
TUCSON, AZ 85701 (520) 623-6143

0' 500' 1000'

D. VEGETATION

1. Vegetative Communities and Associations on the Site

The project site is part of an alluvial fan of the Tortolita Mountains, and has vegetation types and species composition similar to areas in the vicinity. The site contains many small, low flow washes that traverse the entire site diagonally northeast to southwest, which include riparian areas. Exhibit I.D.1: Vegetation Communities displays the vegetative communities on this site. The vegetation communities and associations on the site are as follows:

1) Arizona Upland Subdivision Community, Palo Verde-Cacti-Mixed Scrub Association.

Species commonly present in this habitat include Saguaro cactus (*Carnegiea giganteus*), Foothill Palo Verde (*Cercidium microphyllum*.), Mesquite (*Prosopis velutina*), Acacia (*Acacia spp.*), Crucifixion thorn (*Canotia halocantha*), various Cholla cactus (*Opuntilla* species), and Prickly Pear Cactus (*opuntia spp*.). Barrel Cactus (*ferocactus. viwlenzii*), Ocotillo (*Fouquieria splendens)*

2) Xeororiparian Habitat

Xeroriparian habitats are supported by intermittent or ephemeral stream flows. Typical species associated with this habitat type include Mesquite (*Prosopis* species), Blue Palo Verde (*Cercidium floridum)*, Desert Willow (*Chilopis linearis*), Catclaw Acacia (*Acacia greggii*), Whitethorn Acacia (*Acacia* species), Desert Hackberry (*Celtis pallida*), and Ironwood (*Olneya tesota*). Actual species composition is typically a function of the extent and frequency of streamflow.

Partial list of plants observed on the site include:

Common Name	Scientific Name
Mesquite	*Prosopis velutina*
Foothills Palo Verde	*Cercidium microphyllum*
Ocotillo	*Fouquieria splendens*
Catclaw Acacia	*A. greggi*
Whitethorn Acacia	*Acacia* species
Saguaro	*Carnegia gigantea*
Triangle-leaf Bursage	*Ambrosia deltoiodea*
Brittlebush	*Encelia farinosa*
Creosote Bush	*Larrea tridentata*
Barrel cactus	*Ferocactus wislizeni*
Hackberry	*Celtis pallida*
Ironwood	*Olneya tesota*
Cholla cactus	Various *Opuntia* species
perennial grasses	Various
Prickley Pear	Various *Opuntia* species

2. **Significant Cacti and Groups of Trees and Federally-listed threatened or Endangered Species:**

There are saguaros onsite that are listed by the State of Arizona as protected species. The saguaros are evenly scattered through the site, and are generally in good condition.

Arizona Game and Fish Department provided a list of special status species that are known to occur in the vicinity of the site. The list included the following plant species. where S1 is classified as sensitive by the Regional Forester of the USDA Forest Service, S2 is classified as sensitive by the Arizona State Office of the BLM. and SR is salvage restricted:

Tumamoc globeberry (Tumamoca macdougalii), S1, S2. SR

3. **Vegetative Densities by Percentage of Plant Cover**

Vegetative densities on the site were measured from aerial photographs and verified by onsite field investigations. Ground covers were not included in density calculations Exhibit I.D.2. Vegetation Densities displays the vegetative densities for this site.

Xeroriparian Areas: Vegetation cover in these washes and area is of medium to high densities (50%-100%) and species composition is similar to that of the adjacent uplands on site. The plants living along the washes are larger and more densely distributed as is typical in Xeroriparian environments.

Arizona Upland Habitat: Vegetative cover is of low to medium density, ranging from 20%-40% coverage in this habitat.

Vegetation Densities were calculated as follows:

- High Density: 71%-100%
- Medium Density: 40%-70%
- Low Density: 0%-39%

EXHIBIT I.D.1: Vegetation Community

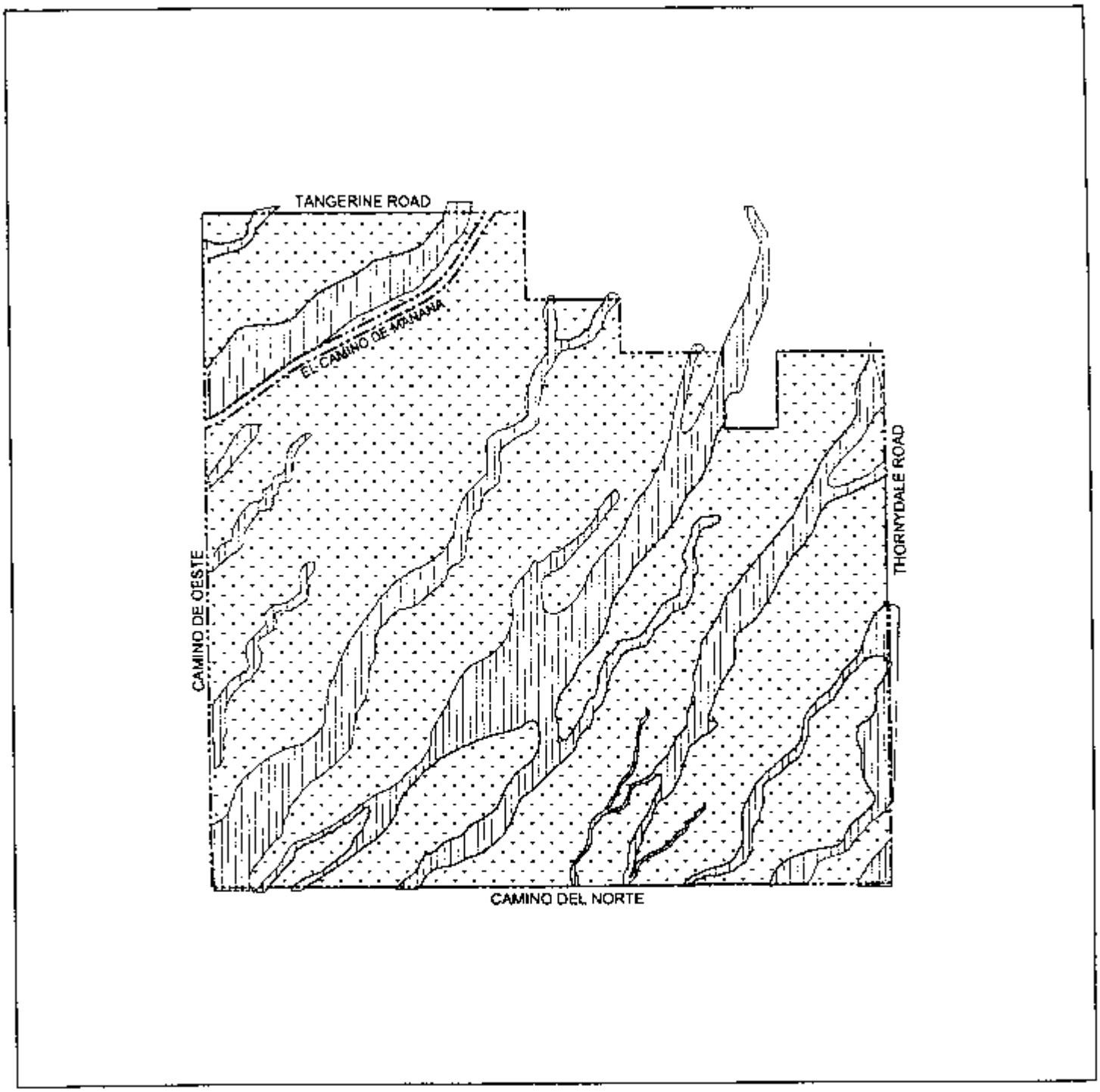
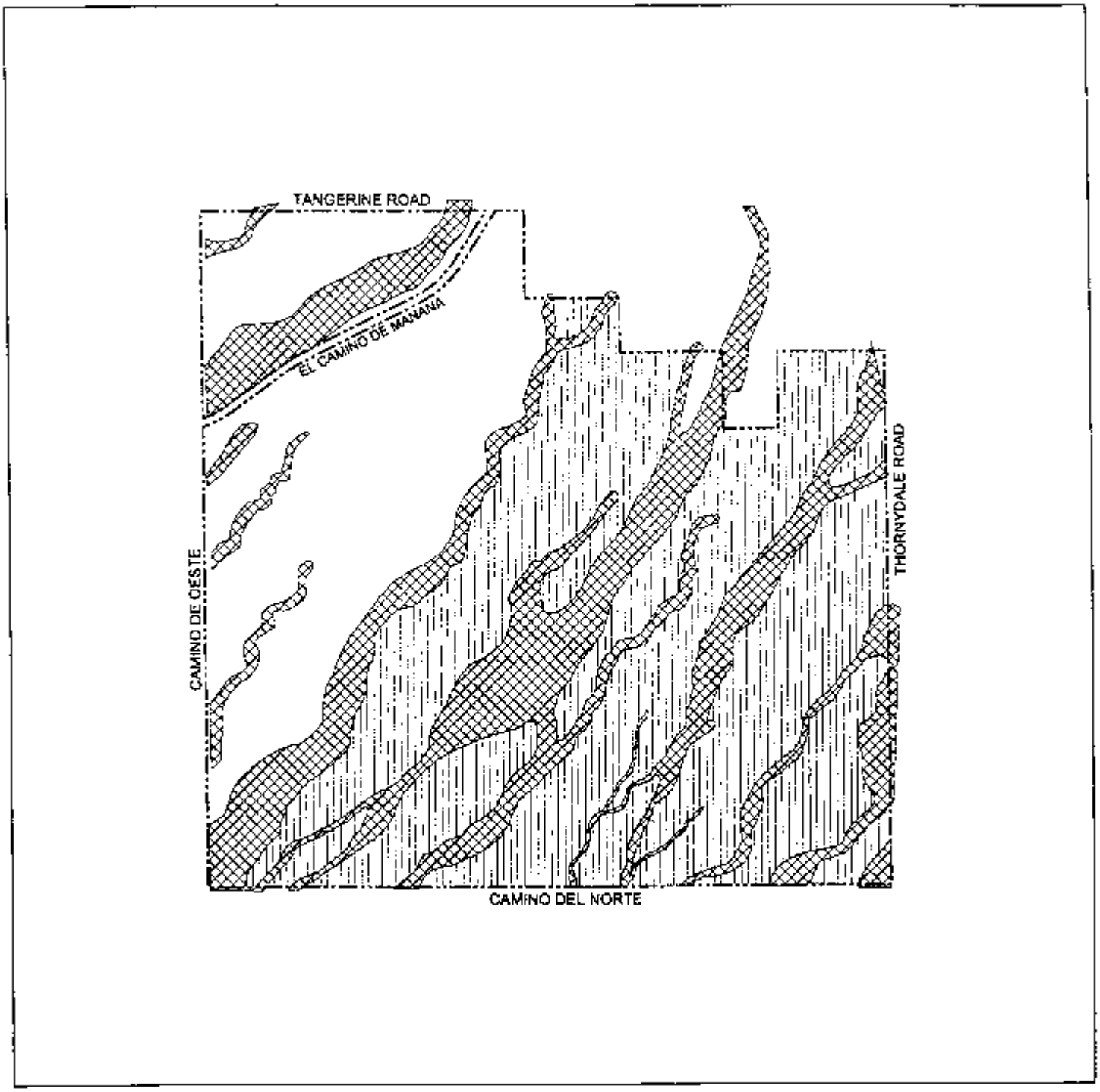


EXHIBIT I.D.2: Vegetation Density



E. WILDLIFE

1. Exhibit I-E: Letter from the Arizona Game and Fish Department, Tucson Office.

A letter from the Tucson Regional Office of the Arizona State Game and Fish Department is included in this report (See Exhibit I.E.1: Arizona Game and Fish Department Letter). Also included, as an attachment to the letter is the "Draft Summary of the Private Landowner Guidance" which provides recommendations for landscape design and site planning in potential pygmy-owl zones. Due to excessive workloads and limited personnel availability, the A.G.F.D. was only able to provide a list of special status species that are known to occur in the vicinity. A summary of the letter is as follows:

a. Threatened or Endangered Species:

According to the A.G.F.D., the following species may potentially occur on or in the immediate vicinity of the proposed project:

Common Name	Scientific Name	Status
Cactus ferruginous pygmy-owl	*Glaucidium brasilianum cactorum*	Listed Endangered, Wildlife of Special Concern. Sensitive
Fulvous whistling-duck	*Dendrocygna bicolor*	Sensitive
Tumamoc globeberry	*Tumamoca macdougalii*	Sensitive, Salvage Restricted

A Pygmy Owl survey was conducted in September of 1999. Pygmy owls were detected off site, and the property owner is involved in ongoing consultation with the U.S. Fish and Wildlife Department. Additional surveys are being conducted by Thomas Olsen Associates, Inc., and will be submitted as part of the Habitat Conservation Plan under separate cover.

a. High Densities of a Given Species:

While not explicitly stated in the A.G.F.D. letter, it is believed that no unusually high densities of any given species are known exist on the site.

c. Aquatic or Riparian Ecosystems:

While not explicitly stated in the A.G.F.D. letter, riparian areas do exist on the site. Approximate delineation of Xeroriparian areas is illustrated in the previous section on Exhibit I.D.1: Vegetation Communities.

2. Other concerns expressed by ADGF:

No other concerns were explicitly mentioned by the AGFD in their letter. As such, no maps or exhibits were prepared for this section.

Exhibit I-E.1: Arizona Game and Fish Department Letter

THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT
2221 West Greenway Road, Phoenix, AZ 85023-4399
(602) 942-3000 • www.azgfd.com

COMMISSIONERS
DIRECTOR
DEPUTY DIRECTOR

Tucson Office, 555 N. Greasewood Rd., Tucson, AZ 85745

RECEIVED
NOV 29 2000

November 28, 2000

Mr. Bill Dean
The Planning Center
110 S. Church, Ste. 1260
Tucson, Arizona 85701

Re: Sky Ranch: 530-Acre Parcel on the Southwest Corner of Thornydale and Tangerine; T12S, R13E, Section 6.

Dear Mr. Dean:

Due to excessive workloads and limited personnel availability, the Arizona Game & Fish Department (Department) is, at this time, only able to provide you with limited information regarding your proposed project. Enclosed, you will find a set of recommendations that relate to Federal/State regulatory compliance and 'wildlife friendly' development practices. Also included is a list of special status species that are known to occur in the vicinity of the above-referenced parcel (Attachment A). This list is based on the review of records in the Department's Heritage Data Management System[1] (HDMS). Any of these species are likely to occur on-site to the degree that the parcel provides the species' habitat requirements. For information that will assist you in identifying the on-site native vegetation communities and their values as wildlife habitat, the Department recommends the following references:

- Brown, D.E. (ed). 1994. *Biotic Communities - Southwestern United States and Northwestern Mexico*. University of Utah Press, 342 pp.
- Shaw W.W., L.K. Harris, M. Livingston, J.P. Charpentier, and C. Wissler. 1996. Pima County Habitat Inventory - Phase II. Arizona Game & Fish Dept. Contract No. G50028-001, Phoenix, AZ. 94pp. (Pima County maintains GIS coverages from this report.)
- Pima County's 1986 Map of Critical and Sensitive Wildlife Habitats.

[1] Information contained in the Department's HDMS is dynamic and updated on a periodic basis. Any information, therefore, is likely to become outdated shortly after its release. Such information is intended to serve as a guide regarding what species may be found in a particular area. It does not represent the results of comprehensive species-specific surveys.

EXHIBIT I.E.1: Wildlife - Arizona Game & Fish Department Letter

Mr. Dean
November 28, 2000
2

The following measures that relate to Federal/State regulatory compliance should be applied when appropriate. Those practices that pertain to landscape design and site planning are practices beneficial in maintaining habitat elements compatible with native desert wildlife. Implementation of these landscape design/site planning practices will not totally mitigate for the loss of native desert habitats, however, evidence shows that incorporation of these practices will foster the retention of those native wildlife species which can exist in urban/suburban environments. The Department recommends these landscape/site planning practices be implemented as part of any anticipated on-site development.

Federal/State Regulatory Compliance:

- It appears that the subject parcel falls within Critical Habitat for the cactus ferruginous pygmy-owl (CFPO) as well as Zone 1 of the CFPO Survey Zones. Apply the attached Guidance for Private Landowners from the USFWS and contact them as appropriate.

- If plants protected under the Arizona Native Plant Law are likely to occur on the subject parcel, contact the Arizona Department of Agriculture for additional information regarding potential restrictions which may apply to the salvage or removal of plant species. A suggested contact is:

Mr. James McGinnis
Manager, Native Plant Law
Plant Services Division
Arizona Dept. of Agriculture
1688 W. Adams
Phoenix, Arizona 85007
602/542-3292

- Adhere to the attached tortoise handling guidelines for development projects if Sonoran desert tortoise are likely to occur on the subject parcel.

- Contact the Department's Tucson Regional Office immediately for direction regarding the disposition of an active bat roost site(s) if one is found on the property.

- During pre-construction and construction activities, contact the Department's Tucson Regional Office immediately for direction regarding the disposition of an active raptor nest(s) if one is found on the property. (Please note that an active raptor nest can also be located in a burrow as well as the more common arboreal situation. Nests of the burrowing owl is one example.)

EXHIBIT I.E.1: Wildlife - Arizona Game & Fish Department Letter

Mr. Dean
November 28, 2000
3

Landscape Design/Site Planning:

- Maximize the amount of interconnected open space within the development.
- Utilize native plant species for all on-site vegetation and revegetation.
- Employ revegetation schemes that re-establish and maintain vertical diversity (ground cover, shrub layer, and canopy cover) with native plant species.
- Retain in place or salvage mature woody vegetation including saguaros and ironwoods (mature adults as well as immatures).
- Maintain the vegetative and hydrologic integrity of all washes, especially those which Pima County's 1986 Map of Critical and Sensitive Wildlife Habitats identifies as Class I or II Riparian Habitats.

Please call me at 520/628-5982 Ext. 137 if you have questions.

Sincerely,

Sherry A. Ruther
Habitat Specialist

SAR:sr

cc: Bob Broscheid, Project Evaluation Program Supervisor, Habitat Branch, PHX (AGFD Log No. 10-27-00/01)
Sherry Barrett, USFWS, Assistant Field Supervisor, Az Ecol. Services Field Ofc, TUC
James McGinnis, AZ Dept. of Ag, Plant Services Div., PHX

Attachments

C:\PROJECTS\CITIES\MARANA\Sky Ranch.doc

EXHIBIT I.E.1: Wildlife - Arizona Game & Fish Department Letter

Mr. Dean
November 28, 2000
4

ATTACHMENT A
SPECIAL STATUS SPECIES
SKY RANCH - 530 ACRES

COMMON NAME	SCIENTIFIC NAME	STATUS
cactus ferruginous pygmy-owl	*Glaucidium brasilianum cactorum*	LE,WC
fulvous whistling-duck	*Dendrocygna bicolor*	S^2
Tumamoc globeberry	*Tumamoca macdougalii*	S^1,S^2,SR

STATUS DEFINITIONS

LE - **Listed Endangered.** Species identified by the U.S. Fish and Wildlife Service under the Endangered Species Act as being in imminent jeopardy of extinction.

WC - **Wildlife of Special Concern in Arizona.** Species whose occurrence in Arizona is or may be in jeopardy, or with known or perceived threats or population declines, as described by the Department's listing of **Wildlife of Special Concern in Arizona** (WSCA, in prep.). Species included in WSCA are currently the same as those in **Threatened Native Wildlife in Arizona** (1988).

S^1 - **Sensitive.** Species classified as "**sensitive**" by the Regional Forester when occurring on lands managed by the U.S.D.A. Forest Service.

S^2 - **Sensitive.** Those taxa occurring on Bureau of Land Management (BLM) Field Office Lands in Arizona which are considered "**sensitive**" by the Arizona State Office of the BLM

SR - **Salvage Restricted.** Those Arizona native plants not included in the Highly Safeguarded Category, but that have a high potential for theft or vandalism, as described by the Arizona Native Plant Law (1993).

F. VIEWSHEDS

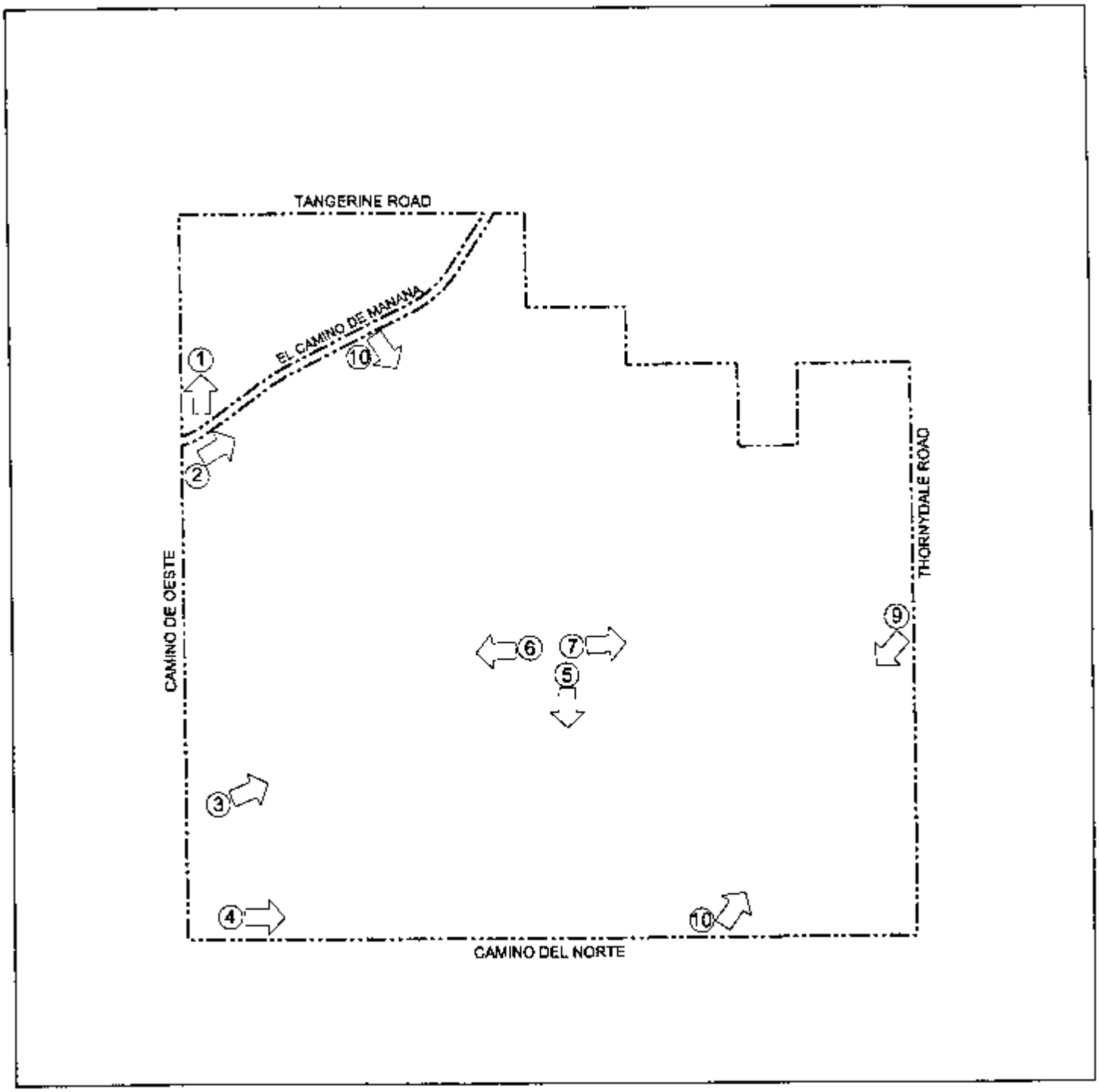
1. Viewsheds Onto and Across the Site:

Views onto the site from adjacent areas include views of the on-site washes and vegetation. The utility lines that run north to south through the center of the site are also visible from adjacent areas. Clear views across the entire property are not possible due to the size of the parcel, the vegetation coverage, as well as the slope of the property; no single location from off-site adjacent areas is high enough to afford views across the entire site. Exhibit I.F.1: Views Across Site indicates the photo locations taken around the site. Site photos that correspond to that exhibit are also included. No views of off-site features such as the Catalina Mountains, Tortolita Mountains, or Tucson Mountains are anticipated to be obstructed by this development.

2. Areas of High Visibility from Adjacent Off-Site Locations:

From adjacent off-site areas, the only areas that are highly visible are along the property boundaries. This is due, in part, to the size of the project and the lack of a vantage point from which to view the entire property. Also, the vegetation on site is of generally high quality and of medium density near the project boundaries. See Exhibit I.F.2: High Visibility Areas.

EXHIBIT I.F.1: Views Across the Site



THE PLANNING CENTER
110 S. CHURCH AVE., SUITE 1200
TUCSON, AZ 85701 (520) 623-6146

0 500' 1000'

Site Photos

Photo 1: Looking northward from intersection of Camino de Manana and Camino de Oeste.

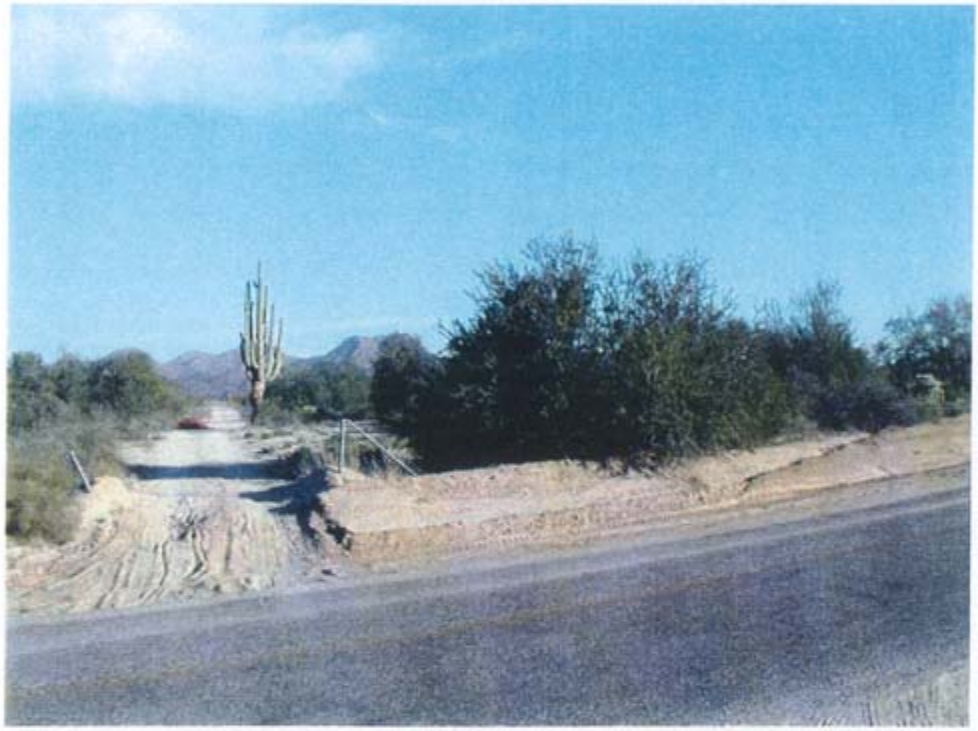


Photo 2: Looking northeast along Camino de Manana from its intersection with Camino de Oeste.

Photo 3: Photo across site as seen from properties adjacent to the west.

Photo 4: View of Camino del Norte from its intersection with Camino de Oeste. This photo depicts the view from adjacent properties on the west.

Photo 5: View of site vegetation and utility poles in center of site.

Photo 6: Photo from on-site looking southwest toward the Tucson Mountains in the distance.

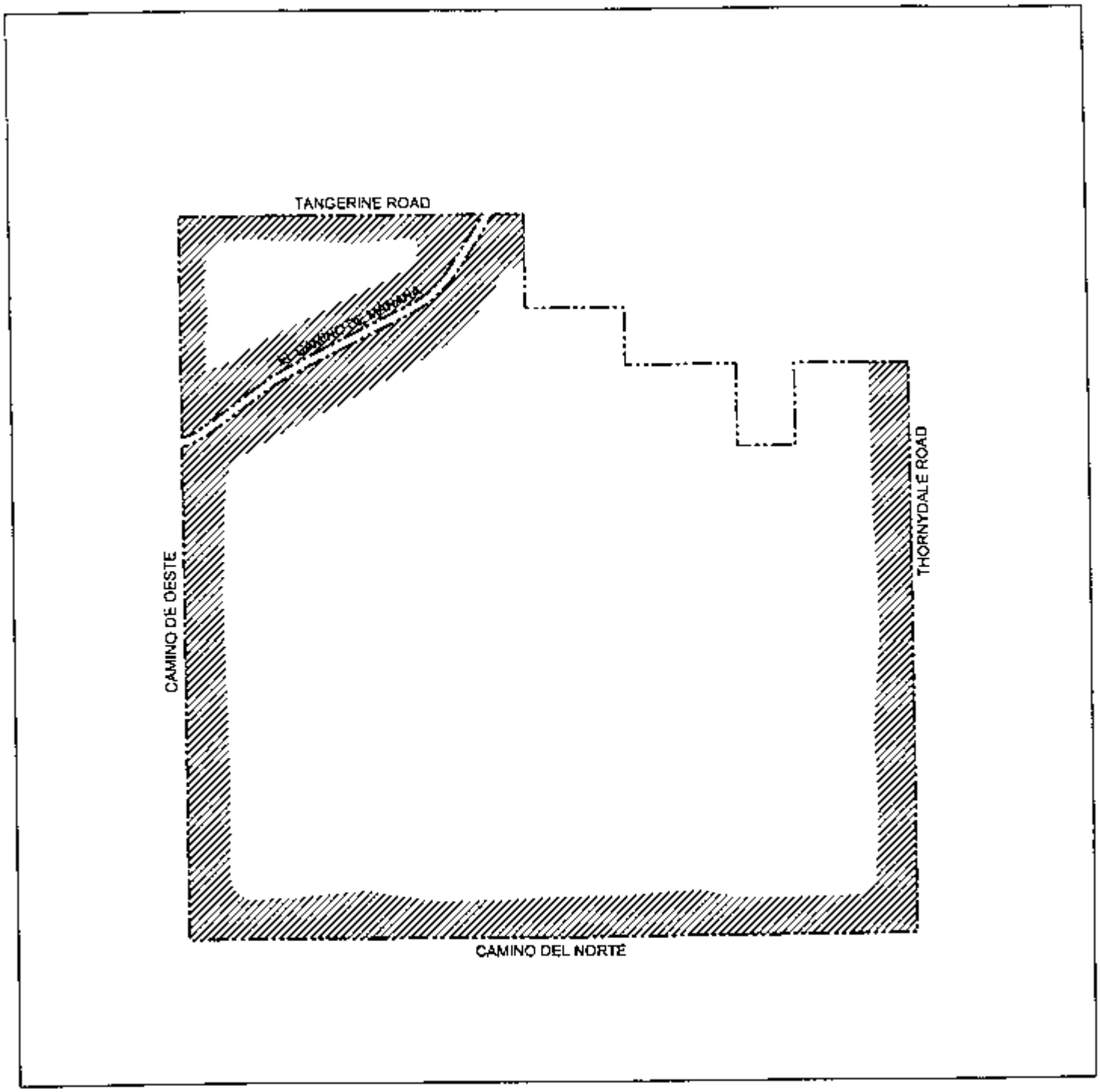
Photo 7: Looking northeast from center of site. Same photo location as photo 6.

Photo 8: Photo from adjacent property on south boundary looking up one of the on-site washes.

Photo 9: Photo of the site's eastern edge as seen from Thornydale Road looking southwest.

Photo 10: Photo across the site as seen from Camino de Manana looking southeast.

Exhibit I.F.2: Areas of High Visibility



G. TRAFFIC

1. Existing and Proposed Offsite Streets:

No off-site roads are proposed as part of this project. Existing roadways within the project area are shown on Exhibit I.G.1: Traffic and on Table 2. A separate traffic statement will be submitted under separate cover as a supplement to the information included in this report.

The following is a description of roadways that abut the site.

Tangerine Road
This is a two-lane roadway that extends from the I-10 west frontage road east approximately 15 miles to connect to Oracle Road (State Route 77), east of this site. The road is owned and maintained by Pima County, Marana, and Oro Valley. This road is designated Interstate/Expressway in the Town of Marana General Plan, and is also designated a State Route for possible future jurisdiction by ADOT. Roadway improvements are expected to be constructed between I-10 and First Avenue within the next 5 to 10 years. These improvements include widening Tangerine to a limited access corridor within a 300-foot right-of-way.

Thornydale Road
This road is a two-lane, paved arterial roadway that extends from Moore Road on the north to Orange Grove Road on the south. The road provides direct access to the Town's major business districts and Interstate 10. This road is scheduled to be improved to a four-lane facility from Linda Vista to Ina Road, a six-lane facility from the Canada del Oro Bridge to Orange Grove Road, and continue as a four-lane roadway to provide a connection to River Road. It is designated as a principal arterial in the Marana General Plan.

El Camino de Manana
This is a two-lane roadway that extends in a northeasterly direction from the I-10 westbound frontage road on the west to Moore Road on the north. The road is paved south of Tangerine and unpaved north of Tangerine. This roadway provides access into large lot residential areas that abut it.

Camino Del Norte

Camino del Norte is a local unpaved road that extends along the southern boundary of the site.

2. All Arterial Streets within One Mile of the Project Site:

Table 2: Traffic Table includes information on arterial streets and other roadways within one mile of the project site. Please also refer to Skyranch Traffic Impact Analysis prepared by Curtis Lueck and Associates submitted under separate cover.

TABLE 2: Traffic Table
Existing Arterial Streets and Other Roadways Surrounding the Site*

Street	Tangerine	Thornydale	Moore	W. Naranja Drive	El Camino de Manana	Camino de Oeste	Camino del Norte	N. Shannon Drive
Functional Classification	Principal Arterial	Principal Arterial	Major Collector	Local Street	Minor Collector	Minor Collector	Local Street	Minor Collector
Existing R.O.W.	150'	150'	150'	150'	60'	150	150'	150'
Future ROW **	300' (4 Lane)	150'	150'[1]	150'	60'	150'	150'	150'
Travel Lanes	2	2	2	2	2	2	2	2
Speed Limit	50 mph	50 mph	40 mph	40 mph	35 mph	25 mph	25 mph	35 mph
Theoretical Capacity at LOS D	23,300	13,500	10,200	10,200	10,200	10,200	10,200	10,200
Current Avg. Daily Trips	Thornydale to La Cholla 6,594	Tangerine to Overton 5,558	Thornydale to La cholla 500	La Cholla to La Canada 2,600	West of Camino De Oeste 346	South of Camino de Manana 300	Camino de Oeste to Thornydale 200	Overton to Tangerine 5,400
Bicycle Lanes	No	No	No	No	No	No	No	No
Pedestrian Ways	No	No	No	No	No	No	No	No
Ownership	State of Arizona and Town of Marana	Pima County and Town of Marana	Pima County	Pima County and Oro Valley	Town of Marana	Town of Marana	Town of Marana	Pima County
Surface Condition	paved	paved	paved	paved	paved	unpaved	paved	paved
Program for Improvements	Yes	To be determined	To be determined	To be determined	To be determined	To be determined	To be determined	To be determined
R.O.W. Jog (J) or Continuous (C)	C	C	C	C	C	C	C	C

Sources: Pima County, Pima Association of Governments Traffic Counts 2000, and Town of Marana Traffic Counts 2000, Town of Marana staff.

* According to Town officials, the Future Right-of-Way and program for improvements is not currently known for some roadways. The Town's Regional Transportation Plan is currently being completed, and is not yet published.

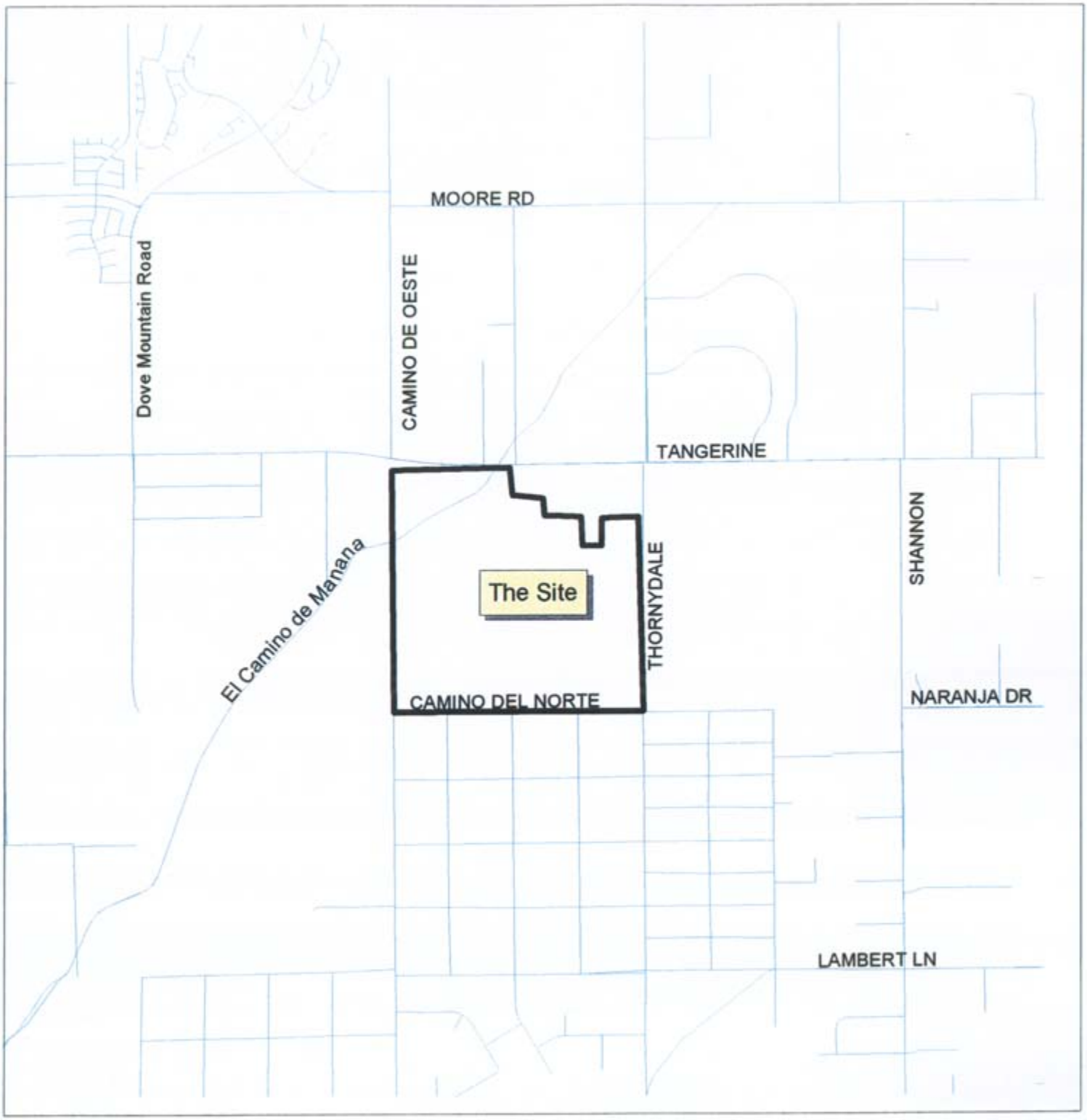
3. Existing and Proposed Intersections or Arterials within One Mile Most Likely to Be Used by Traffic From Site

1. Dove Mountain/Tangerine- existing
2. Tangerine/Thornydale-existing
3. Tangerine/Shannon-existing
4 El Camino de Manana and Tangerine-existing

4. Existing Bicycle and Pedestrian Ways Adjacent to the Site

There are no bicycle lanes on roadways abutting the site.

EXHIBIT I.G.1: Traffic



H. RECREATION AND TRAILS

According to the 1989 Eastern Pima County Trail System Master Plan and the recently adopted Town of Marana Trail System Master Plan, there are seven candidate trails within approximately one mile of the subject property (See Exhibit I.H.1: Recreation and Trails). Table 3. Inventory of Candidate Trails provides information on these trails.

There are currently no parks or other designated recreation areas within a one-mile radius

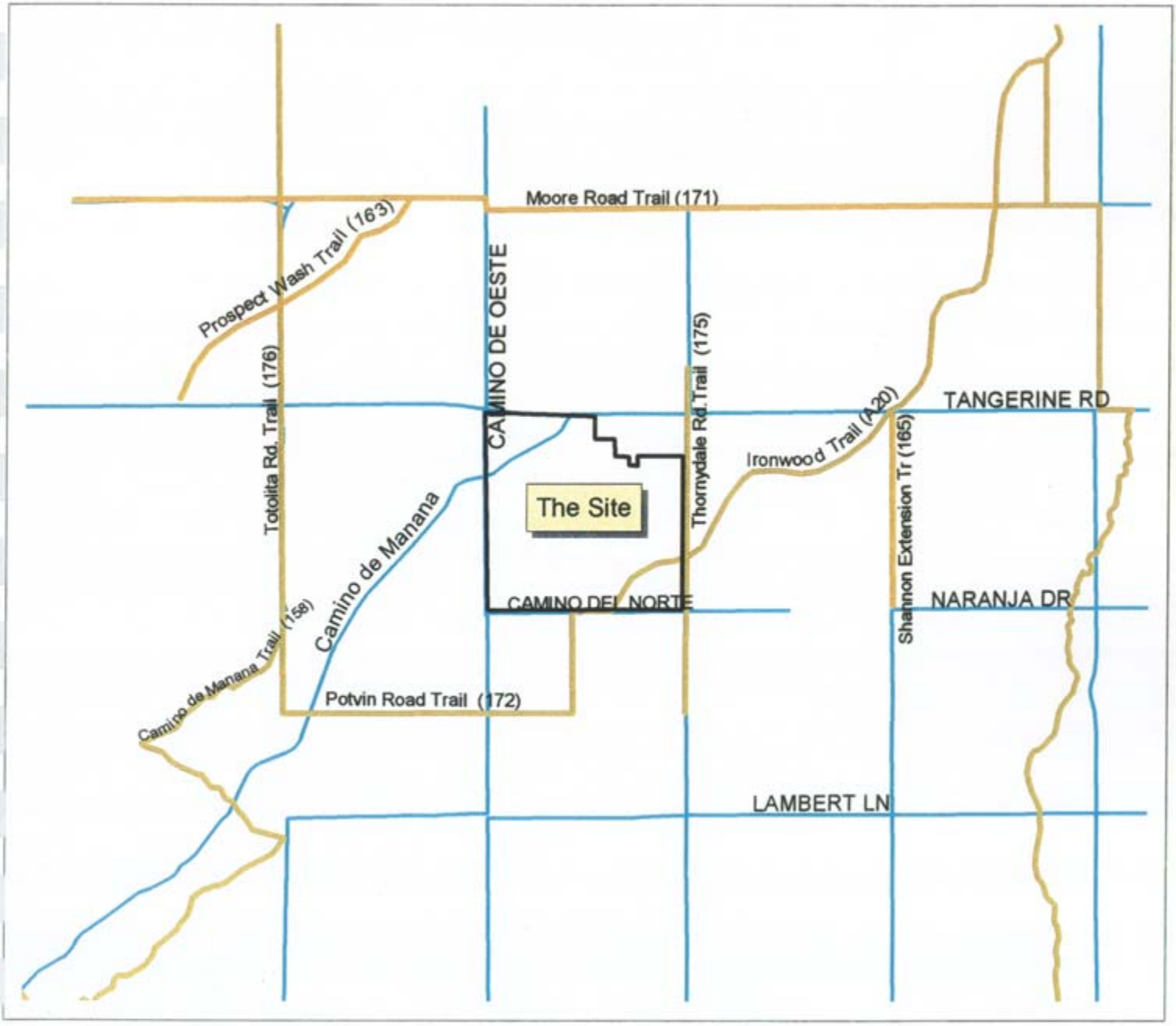
Table 3: Inventory of Candidate Trails

Trail Description			Trail Setting					Recreational Uses				
Candidate Trail	Trail Map Code	Trail Type	Wash	Cross-Country	Road Row	Utility ESMT/ ROW	Linear Park	Whole Access	Foot	Horse	Mountain Bike	Road Bike
El Camino de Manana Wash	158	L	X	X					X	X		
Prospect Wash	163	L	X			X			X	X		
Shannon Extension	165	L		X					X	X	X	
Moore Road	171	L			X				X	X	X	X
Potvin Rd	172	L				X			X	X	X	
Thornydale Road	175	L			X				X	X	X	X
Dove Mountain Rd.	176	L				X			X	X	X	X
Ironwood Trail	A20	L	X	X	X				X	X	X	

Trail Type Code P = Primary Trail, C = Connector Trail, L = Local Trail

Source: Town of Marana Trail System Master Plan, prepared by McGann & Associates, Inc., September 2000.

EXHIBIT I.H.1: Recreation and Trails



I. CULTURAL/ARCHAEOLOGICAL/HISTORIC RESOURCES

1. Location of Resources on Site

The property was examined for archaeological sites in 1981. There is one known archaeological site on the SKYRANCH property. It was recorded as AZ AA:12:200 (ASM). It is located in the southwest portion of the site approximately 24 meters north of the southern boundary.

2. Letter from the Arizona State Museum

The Arizona State Museum recommends that since the original survey was not done in a manner consistent with today's standards that the entire site be resurveyed. In addition to the resurvey, the Museum recommends rerecording site AA:12:200 (ASM). A letter from the Museum is provided as Exhibit I I.1: State Museum Letter.

EXHIBIT I.1.1: Arizona State Museum Letter

THE UNIVERSITY OF
ARIZONA.
TUCSON ARIZONA

Arizona State Museum
Tucson, Arizona 85721-0026
(520) 621-6281
FAX (520) 621-2976

RECEIVED
OCT 27 2000

October 11, 2000

Mr. Bill Dean
The Planning Center
110 S. Church, Suite 1260
Tucson, Arizona 85701

Dear Mr. Dean

On October 23, 2000 you requested an archaeological site file check for property located in Section 06, Township 12 South, Range 13 East, Gila and Salt River Baseline and Meridian, Pima County, Arizona. Your request is in conjunction with the rezoning of approximately 530 acres on the southwest corner of Thornydale and Tangerine Road (Attachment 1).

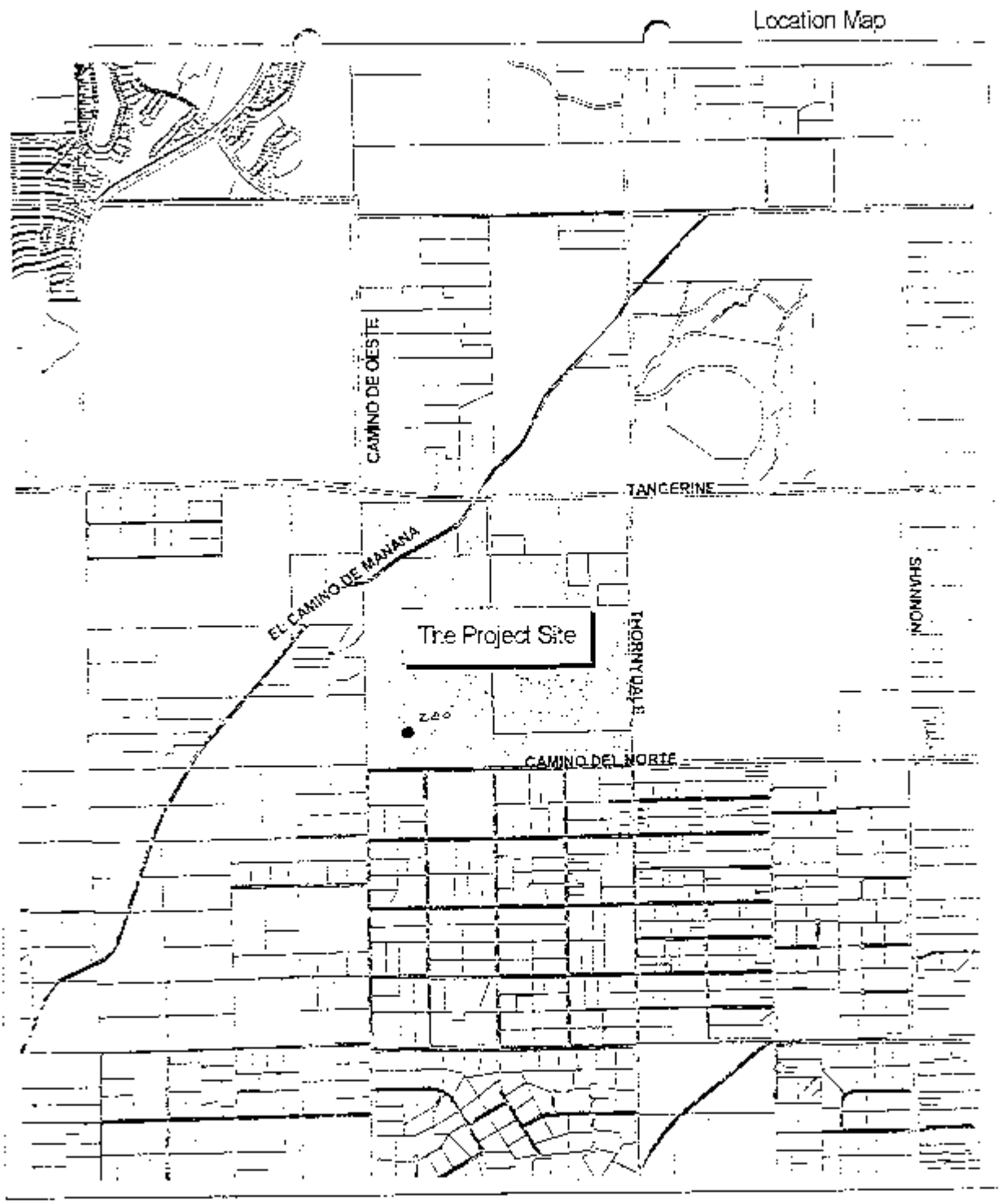
The Archaeological Site Survey Files at the Arizona State Museum have been consulted with the following results. Students from the University of Arizona inspected the parcel for archaeological sites in 1981. The survey was not done in a manner consistent with today's standards therefore the Museum recommends an archaeological survey of the 530 acres. One site recorded as AZ AA 12:200 (ASM) is on the property (attachment 1).

In addition to recording new sites the archaeological contractor should rerecord site AZ AA.12:200 (ASM) If the sites are believed to be important the contractor shall make recommendations regarding how to protect and preserve the information contained in the sites.

Sincerely,

John H. Madsen
Permits Administrator
(520) 621-2096

Arizona State Museum (continued)

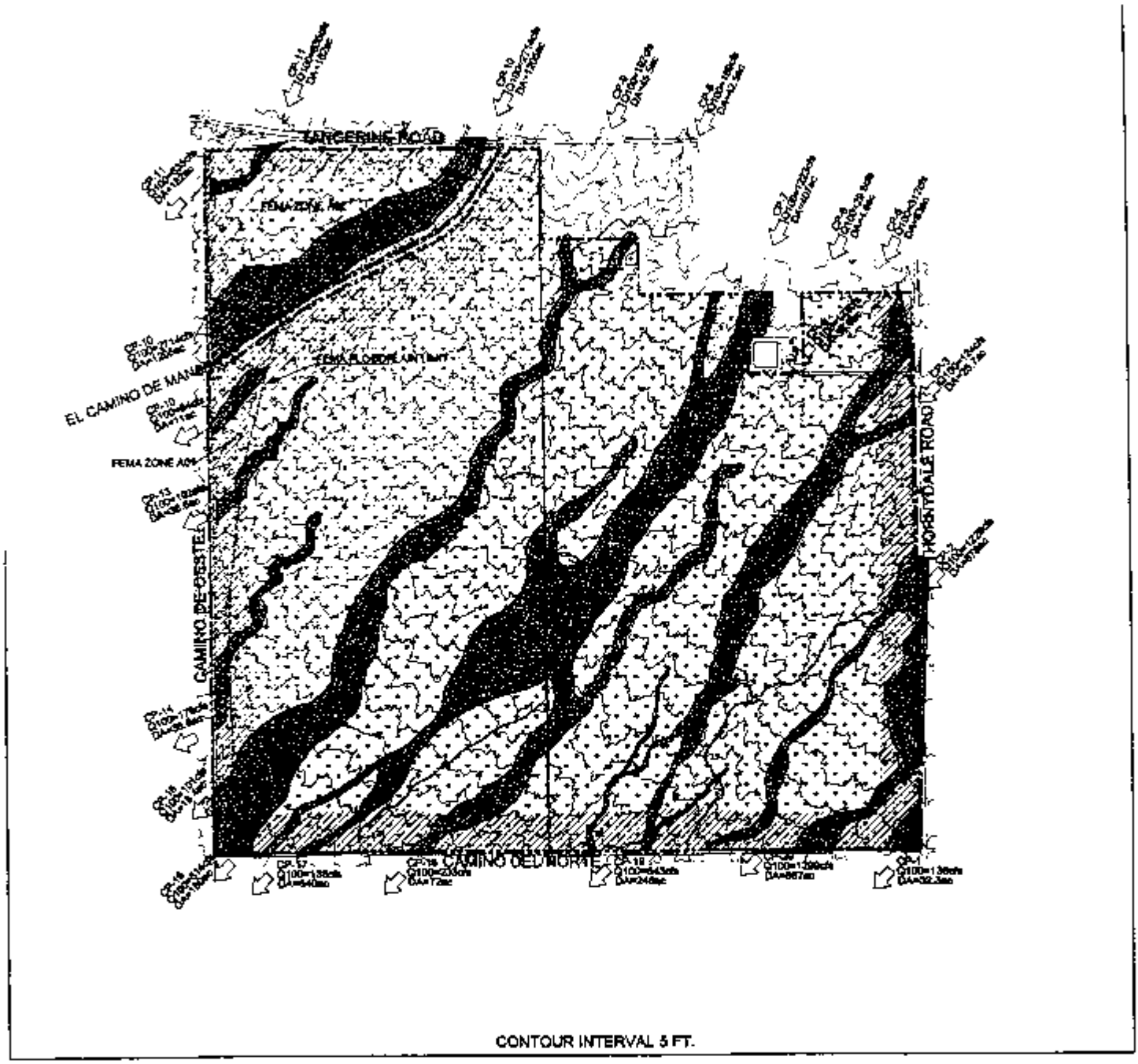


Approximately 503 acres in T12S, R 13E, Section 6

J. McHarg Composite Information

Information regarding topography, hydrology, vegetation, wildlife, and views has been combined to form the McHarg Composite Map displayed as Exhibit I.J 1.

EXHIBIT I.J.1: McHarg Composite Map

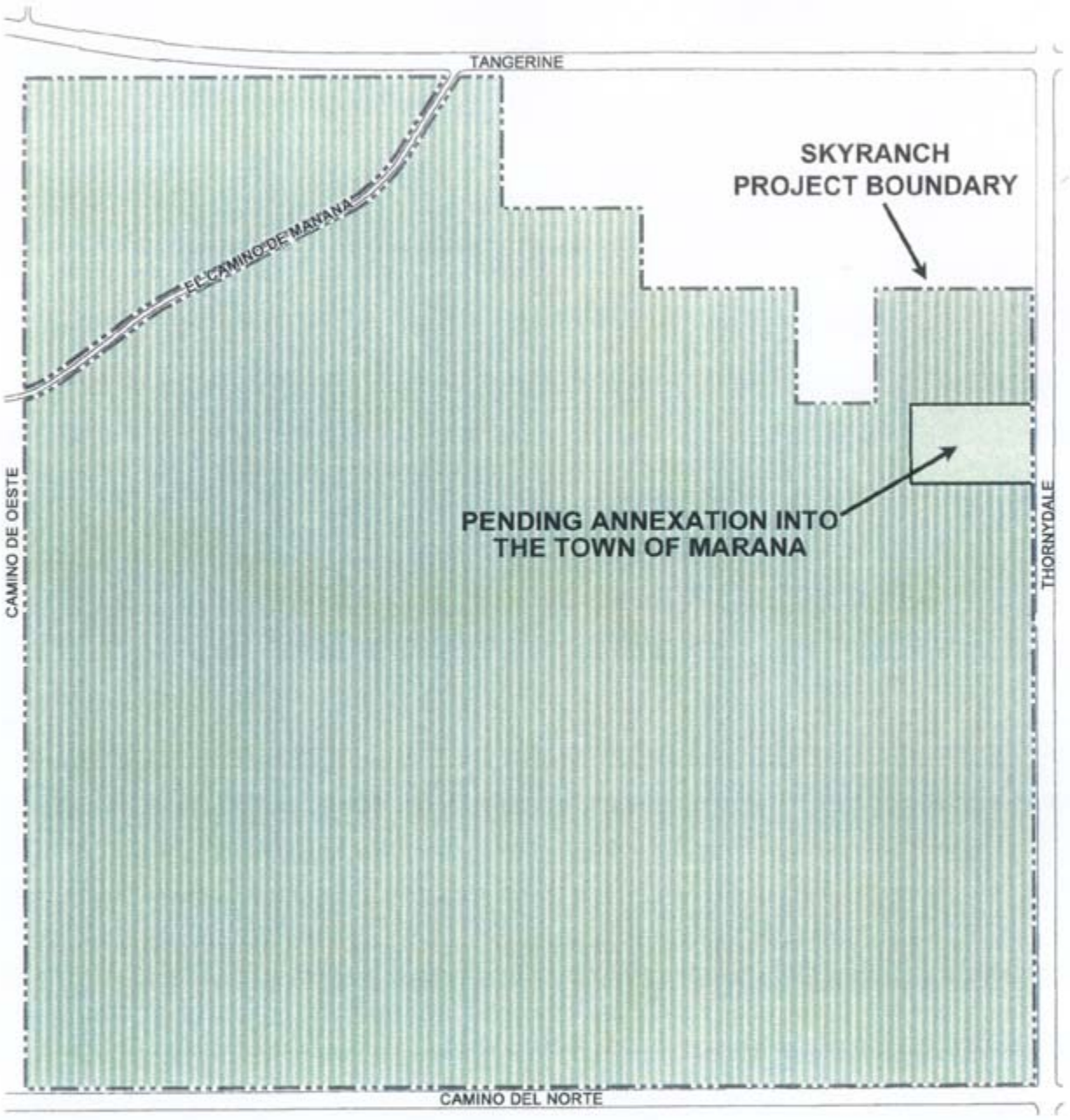


Section II
Development Plan

A. PURPOSE

The SKYRANCH Specific Plan establishes comprehensive guidance and regulations for the development of a 515-acre residential community within the Town of Marana, Pima County, Arizona. The Specific Plan serves as a regulatory tool governing planning and zoning and is adopted by ordinance. The Specific Plan conforms to the Town of Marana General Plan and supplements the Town Development Code. The Specific Plan is a tool used to implement the General Plan at a more detailed site-specific level for a focused area. The Specific Plan articulates the planning considerations for such parcels and imposes regulations or controls on the use of such parcels. The boundaries of this Specific Plan are shown on Exhibit II.A 1

Exhibit II.A.1: Rezoning Boundary



LEGEND

SKYRANCH SPECIFIC PLAN
REZONING AREA

5.51 ACRES CURRENTLY IN PIMA COUNTY

THE PLANNING CENTER

B. LOCATION

The 515 acre SKYRANCH Specific Plan property is located in the northeastern portion of the Town of Marana in Section 06, Township 12S, Range 13E. The site lies approximately six and one-half miles east of Interstate 10, six miles north of the Orange Grove/I-10 interchange, two miles west of Oro Valley and six miles south of the Pima/Pinal County line.

Tangerine Road is the northern boundary and Camino Del Norte is the southern boundary. Thornydale Road bounds the site along the eastern edge. The western edge is bound by private property and Camino del Oeste. El Camino de Manana crosses the northwestern corner of the property before intersecting with Tangerine Road.

C. AUTHORITY AND SCOPE

The Town of Marana Land Development Code provides the uniform procedures and criteria for the preparation, review, adoption and implementation of specific plans in Marana.

The SKYRANCH Specific Plan is a regulatory plan, which will serve as the zoning and development code for the subject property. Final plats and any other development approvals must be consistent with the Specific Plan.

D. LEGAL DESCRIPTION

See Appendix A for Pima County Assessor's parcel record information.

E. GOALS

The purpose of the Specific Plan is to guide the development of the SKYRANCH site and provide direction for community design and management of open space. This plan is intended to implement policies of the Town of Marana's General Plan with a unique vision that suits the needs of the site. Development criteria established in this plan will ensure quality design and marketability of this property while bringing new concepts of subdivision design and open space conservation

The goals of the SKYRANCH Specific Plan are to:

- Support the goals and policies of the Town of Marana's General Plan by implementing the Town's Zoning Code.

- Create a residential development that serves the needs of the region and contributes to the overall quality of the community;
- Coordinate project design to provide a land use pattern compatible with natural environment;
- Integrate development and conservation techniques to conserve portions of the site as wildlife habitat while at the same time developing a cohesive residential setting;
- Ensure coordinated, responsible planning through the use of cohesive procedures, development regulations, standards, and guidelines;
- Create flexibility in street standards in order to preserve significant land around natural washes and other heavily vegetated areas;
- Implement U.S. Fish and Wildlife guidelines for the Pygmy Owl habitat recovery;
- Provide uniform development regulations for land use, circulation and environmental conservation;
- Develop design guidelines for the project that will provide for and encourage variations in the design of all structures.

F. RELATIONSHIP TO ADOPTED PLANS

This plan conforms to the Town of Marana General Plan, and the recommendations set forth by the U.S. Fish and Wildlife Service for this site.

G. LAND USE CONCEPT PLAN

The SKYRANCH Specific Plan is unique in that it plans for the conservation of Pygmy Owl Habitat. The Land Use Concept Plan for SKYRANCH relies on a unique approach to residential development that conserves significant wildlife habitat and open space. The location of the residential areas within the setting of habitat conservation creates and exciting opportunity that adheres to the applicable guidelines set forth by U.S. Fish and Wildlife Service, thereby encouraging other developments within designated critical habitat areas to adopt similar regulations and design guidelines.

The Land Use Concept Plan is illustrated as Exhibit II.G 1. As shown on the exhibit, the proposed land use allocation for SKYRANCH includes two designations. Residential uses encompass approximately 20 percent of the site, which includes all streets, lots and utility lines. Residential uses are concentrated in two areas: the western portion of the site, and a smaller area along the

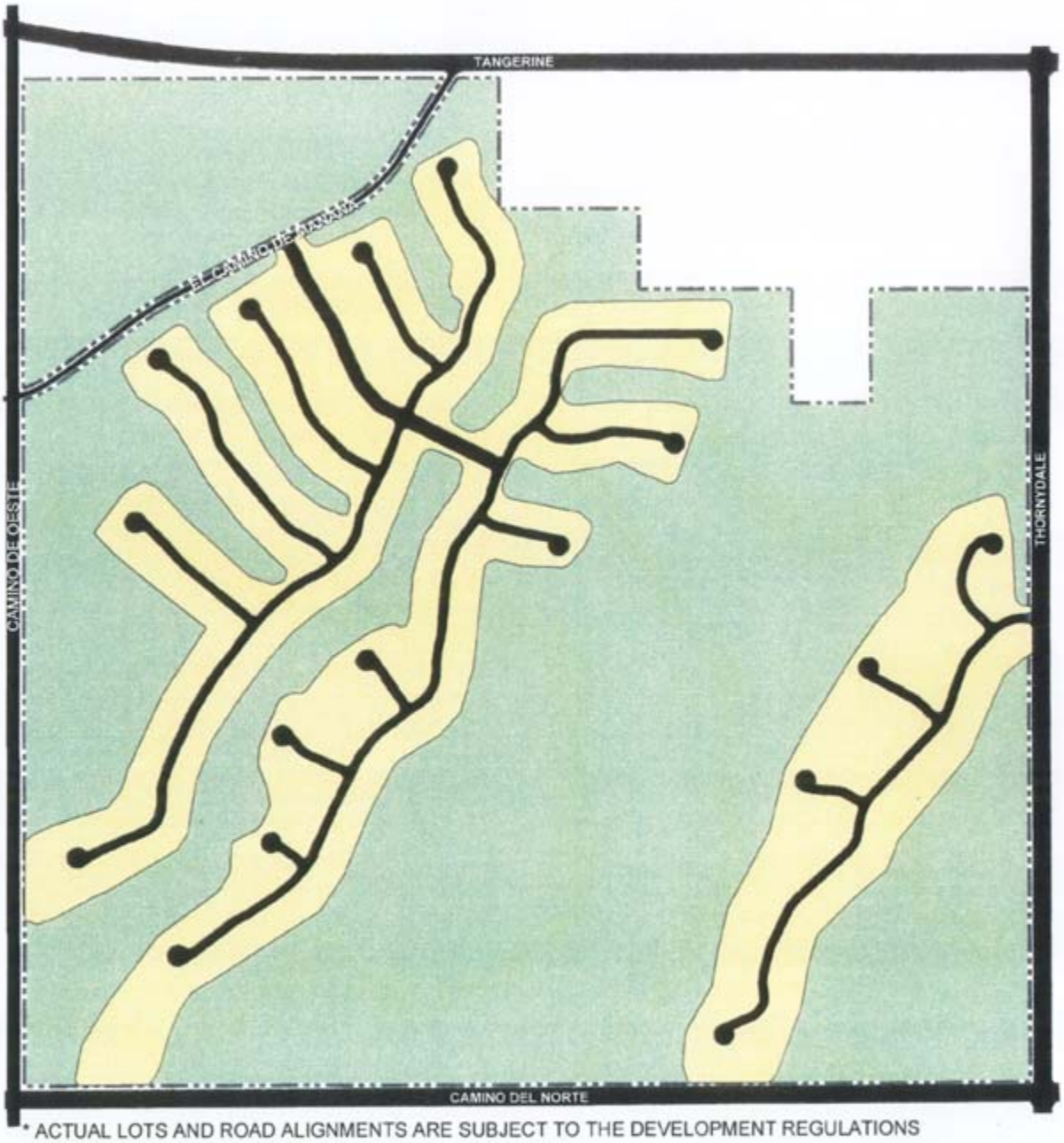
southeastern edge of the property. These two areas represent the areas where grading is allowed. The open space in SKYRANCH encompasses 80 percent of the site and includes open space in and around the residential areas as well as a primary corridor of open space between residential areas. Based on these percentages, from the total 515 acres, approximately 412 acres, or 80 percent, will be open space, and approximately 103 acres, or 20 percent will be residential uses. Rights-of-way will be dedicated to the Town at the time of platting and disturbed area acreage will be refined to stay within the 20 percent ratio.

A Habitat Conservation Plan (HCP) is being prepared by Thomas Olsen and Associates and will be submitted as a separate cover. In addition, design guidelines which reflect the regulations and guidelines set forth in the Habitat Conservation Plan will be prepared and submitted to the Town of Marana under separate cover.

Many of the design regulations have been adapted from the Pima County Conservation-Subdivision Ordinance in response to concerns raised by the U.S. Fish and Wildlife Service during the Habitat Conservation Plan planning process. As a result, some of the road standards and treatment of trails may be contrary to Town of Marana policy and codes. Where there are inconsistencies between the approved Habitat Conservation Plan and Town of Marana policies and codes, the Town of Marana reserves the right to administratively permit, by the Town Manager, the policies and guidelines provided in the Habitat Conservation Plan that have been accepted and/or recommended by the U.S. Fish and Wildlife Service.

An example of how the site may be developed is Exhibit II.G.2: Conceptual Lotting. This exhibit illustrates the possible development of the residential areas and the areas to be conserved as open space.

Exhibit II.G.1: Land Use Concept Plan



* ACTUAL LOTS AND ROAD ALIGNMENTS ARE SUBJECT TO THE DEVELOPMENT REGULATIONS AS SET FORTH IN SECTION III.D OF THE SPECIFIC PLAN.

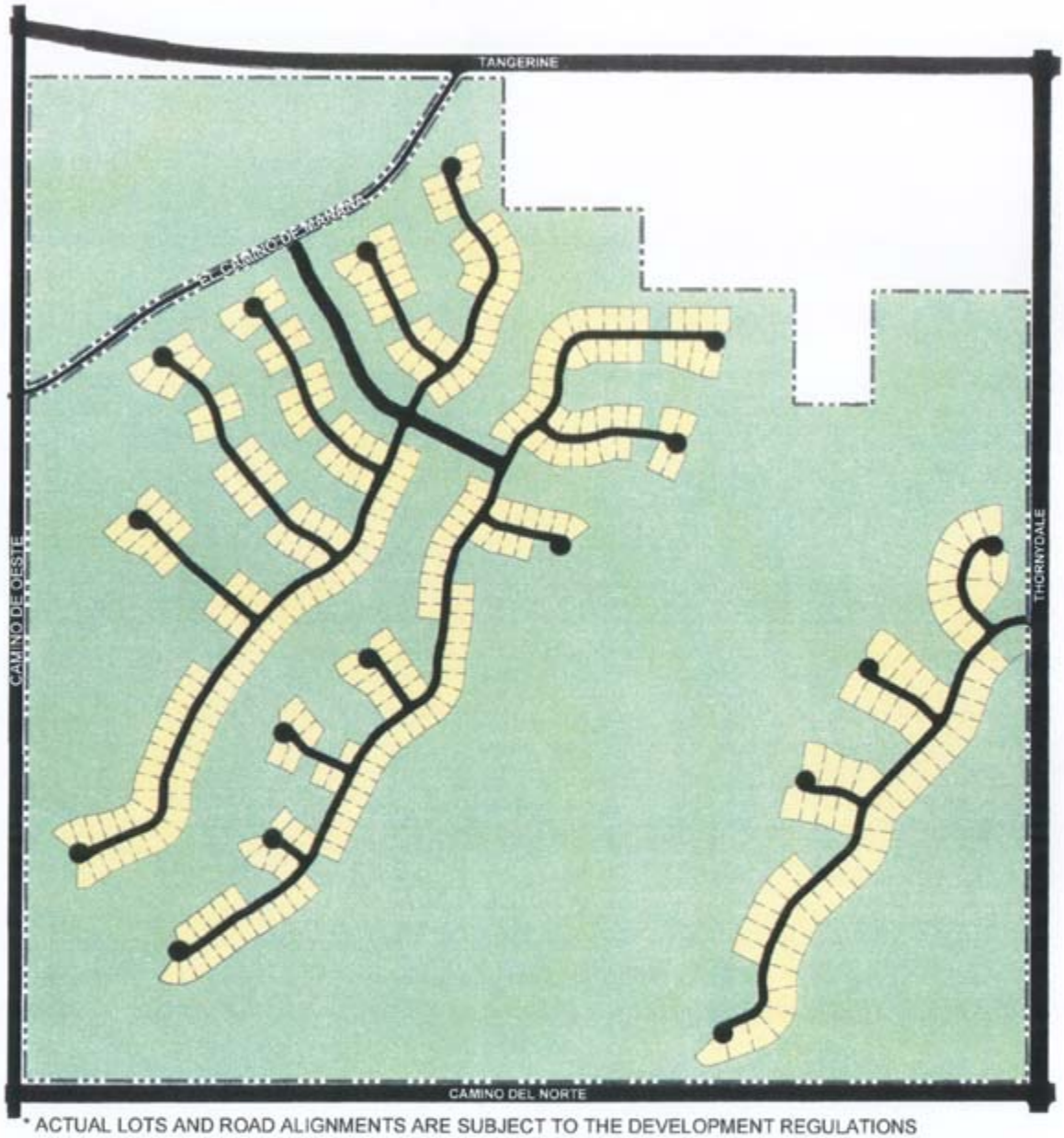
LEGEND

RESIDENTIAL AREA

OPEN SPACE

THE PLANNING CENTER

Exhibit II.G.2: Conceptual Lotting



* ACTUAL LOTS AND ROAD ALIGNMENTS ARE SUBJECT TO THE DEVELOPMENT REGULATIONS AS SET FORTH IN SECTION III.D OF THE SPECIFIC PLAN.

LEGEND

LOTS

OPEN SPACE

THE PLANNING CENTER

H. Circulation Element

As displayed on Exhibit II.H.1: Proposed Circulation Plan, direct access to this project will be provided through one access point on Thornydale Road, and one on El Camino de Manana No vehicular access will be provided from Tangerine Road due to its planned status as a limited access arterial

General circulation in the area includes access and connectivity to Oro Valley and business districts to the south of the site via arterial roadways around the site. Interstate 10 is accessible by way of Tangerine Road or routes such as El Camino de Manana via Cortaro Farms Road and the Interstate Frontage Roads.

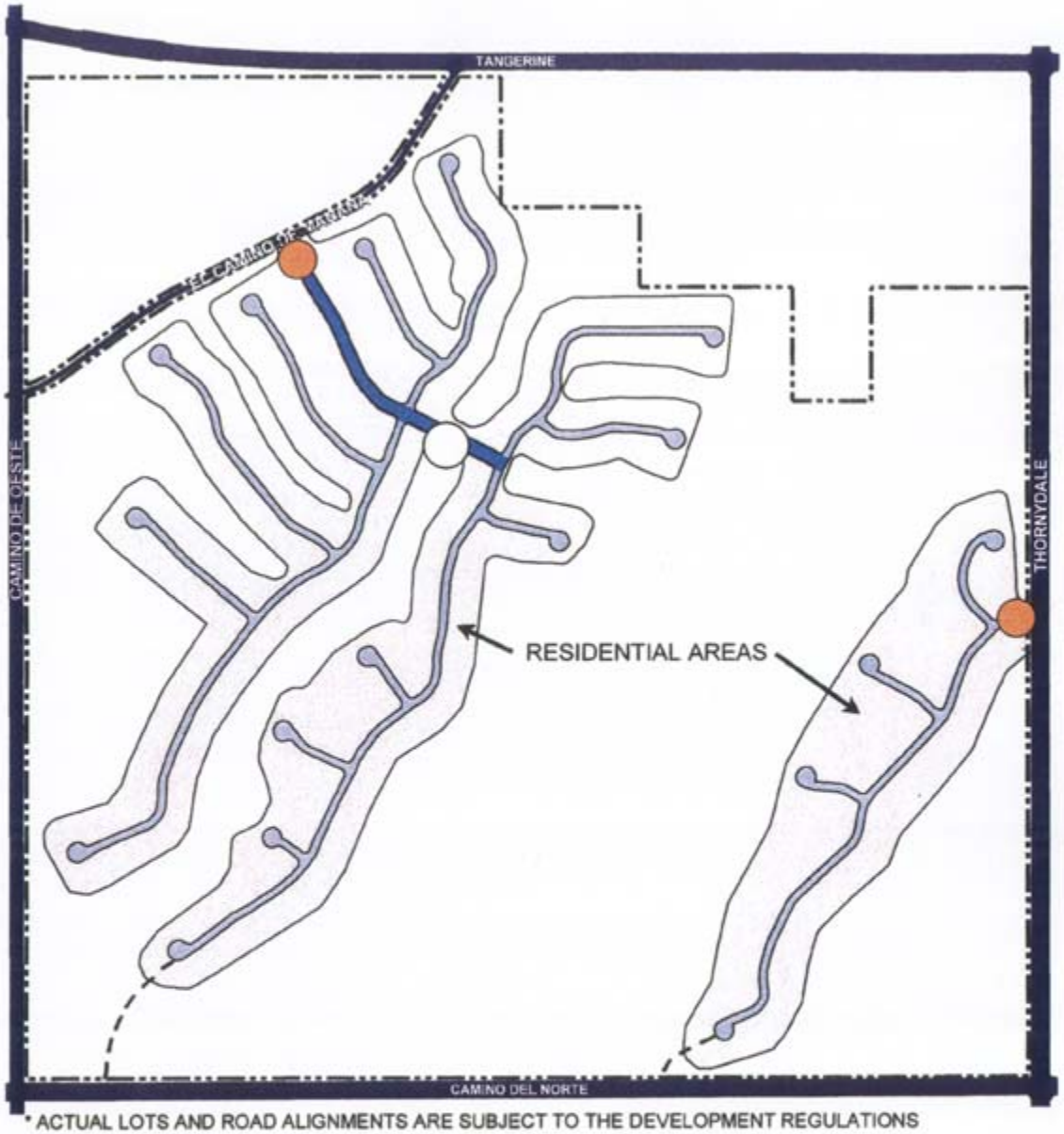
Internal circulation is restricted due to the size and quantity of regulatory washes on-site. Internal circulation within the residential areas will be via a series of local residential streets branching from two main entrance roadways. One main entrance roadway is accessed off Thornydale Road, and one is accessed off El Camino de Manana. Exhibit II.H.1: Circulation Concept Plan illustrates the proposed internal circulation system.

The internal street system shall be private beginning at those points where it leaves the existing public right-of-way. Gated access points will be established at these locations.

All roadway improvements will be the responsibility of the property owner. Any required off-site roadway improvements will be identified in a traffic analysis report submitted under separate cover. The report will be approved by the Town Transportation Engineer prior to the final approval of subdivision plats. This traffic study will provide an analysis of existing roadways and intersection capacities and will be reviewed and approved by the Town Transportation Engineer.

The minimum roadway cross-sections of the main entrance road as well as minimum roadway cross section of the local streets are discussed in the Development Regulations section of this Specific Plan. Slope and utility easements for internal roadways may extend beyond the minimum right-of-way.

Exhibit II.H.1: Circulation Plan



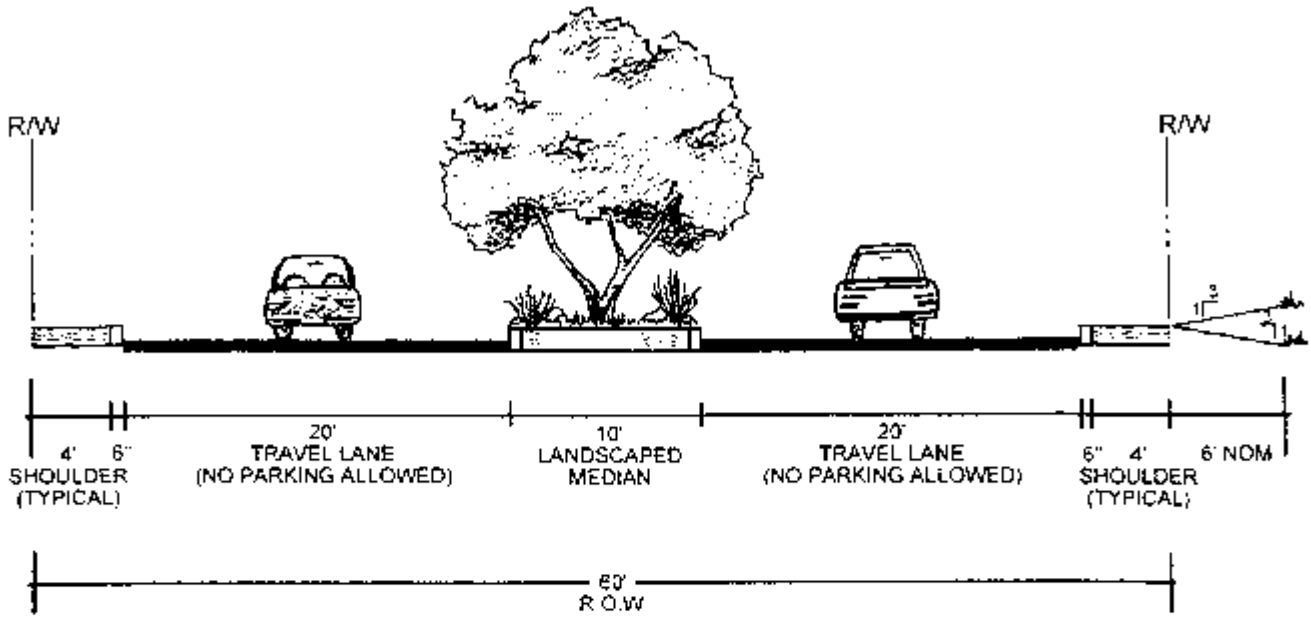
* ACTUAL LOTS AND ROAD ALIGNMENTS ARE SUBJECT TO THE DEVELOPMENT REGULATIONS AS SET FORTH IN SECTION III.D OF THE SPECIFIC PLAN.

LEGEND

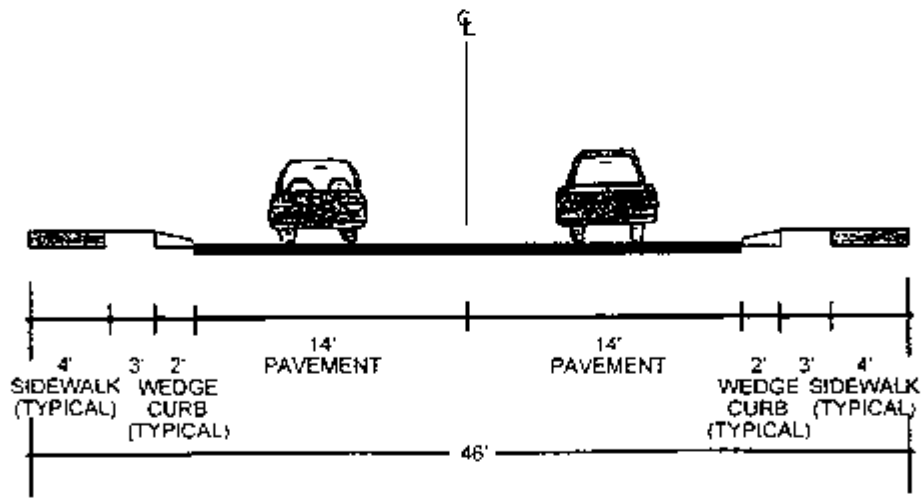
- EXISTING ROADWAY
- ENTRANCE ROADWAY
- LOCAL RESIDENTIAL STREET
- GATED ENTRY
- CONARCH
- EMERGENCY EXIT

THE PLANNING CENTER

Exhibit II.H.2: Typical Cross Sections



TYPICAL COLLECTOR ROADWAY



TYPICAL LOCAL ROADWAY
(PARKING ALLOWED)

I. GRADING ELEMENT

Grading will take place on selected areas of the site, and in conformance with the recommendations of the U.S. Fish and Wildlife Service. The majority of the site will be left in its natural state, and grading will occur on no more than 20% of the site*. The overall allowable grading and related disturbance includes internal roadways and their rights-of-way, building pads, driveways, accessory structure disturbances, utility crossings of natural washes, emergency access drives, and other areas needed for infrastructure and utilities. Barriers such as temporary wire fencing will be provided for machinery in order to ensure that the grading limits of the developable 20 percent of the site will not be exceeded. In addition, the grading will be in conformance with the Land Use Concept Plan and the Development Regulations for SKYRANCH.

*Note: Calculation of the allowable grading in SKYRANCH is based upon the adjusted gross acreage of the project site. The adjusted gross is the project acreage minus any required dedications.

J. WATER RESOURCES

The proposed SKYRANCH development will not have any impact upon existing overall natural site drainage patterns. All washes on site will remain natural. Any wash crossing that is necessary will be accomplished by spanning the wash with a conarch structure. Only one conarch structure is proposed as shown on Exhibit II.H.1: Circulation Plan. Due to the overall low density, encroachments into delineated floodplain areas are minimal.

All of the subdivision lots within the westerly portion of the project are located outside of the 100-year floodplain limits. Several of the lots along the east side of the project may be located within a floodplain area. This floodplain area can be described as a sheetflow zone with flow depths <0.5 feet. The building pads for the lots that are located within the floodplain will be elevated 1 foot above the 100-year water surface elevation to protect the proposed homes. Encroachments into the floodplain area that will be required to facilitate a building site on these lots will not result in any impact to adjoining properties. The extent of encroachment is minimal and will not result in any change in flow velocities or drainage patterns. The building pads will be located outside of the erosion hazard setbacks, so erosion protection will not be required.

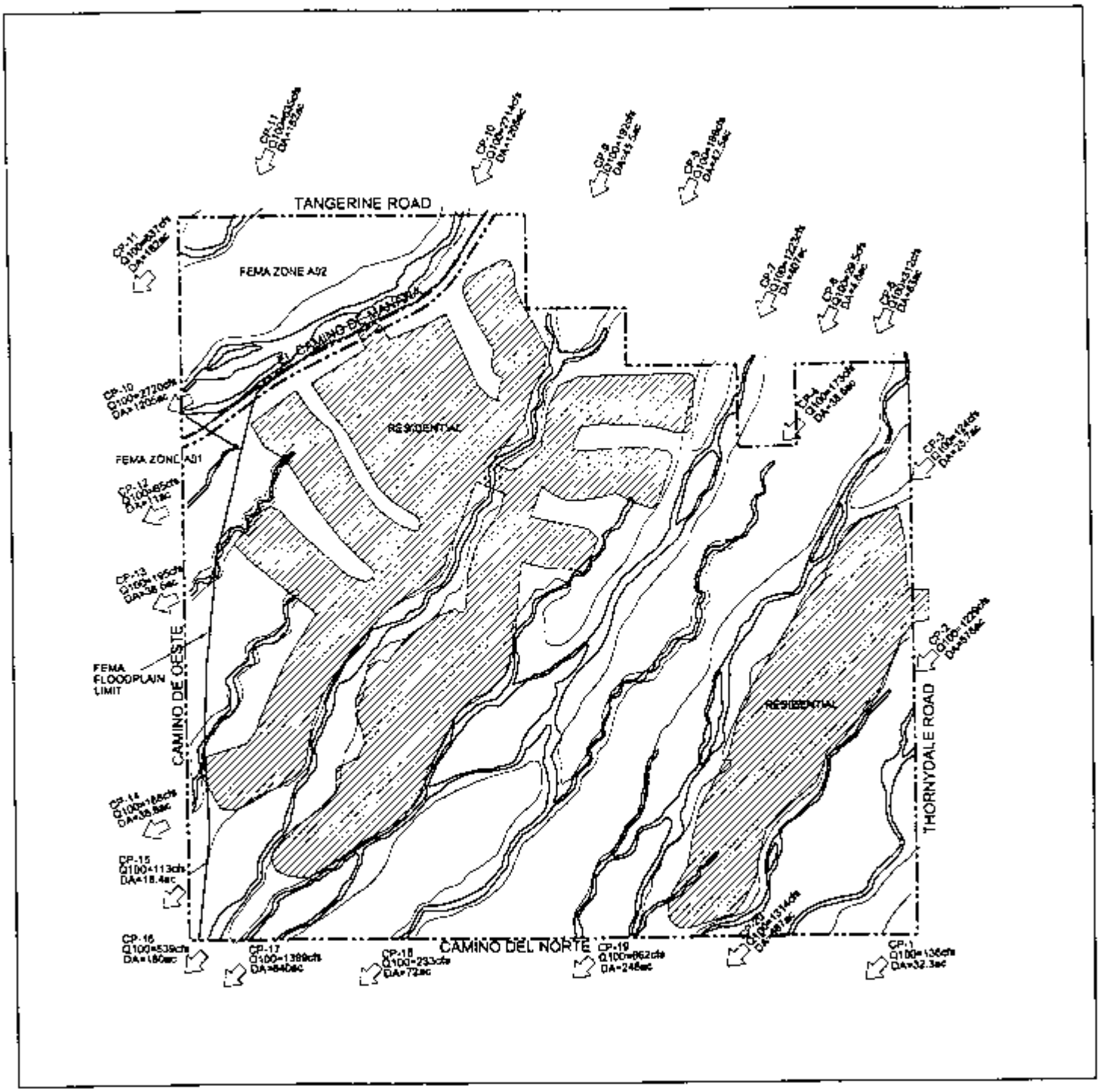
The existing flows entering the site will not change as a result of the proposed development. Post-development discharge rates leaving the site will increase by approximately 5%, and will flow from southern end to natural watercourses. There will be discharge into natural watercourses, as non will be cut off. The overall increase in runoff along the downstream property boundary is minimal

because the project will only result in the disturbance of 20% of the site. The post-development 100-year discharge rates for the concentration points along the downstream project boundary are shown on Exhibit II.J 1.The project will not result in any drainage impacts to offsite land uses both upstream and downstream of the project site. As discussed in previous paragraphs, the project will not result in any modifications to natural washes. Encroachment into the 100-year floodplain areas is limited, so the changes in velocity and depth of flow are negligible. The increase in peak discharge rates is minimal because the project will only disturb approximately 20% of the land area on the project site.

Engineering features to mitigate drainage and erosion problems will only be required to protect the perimeter of the building areas that are located within the 100-year floodplain. The lots that are within the 100-year floodplain are located along the east edge of the site. The building pads for the lots that are within a 100-year floodplain area will be elevated and stabilized with rock riprap to prevent flood inundation and to control erosion. The grading that will be required to elevate these pads will not result in any disturbance to natural channels.

The preliminary development plan conforms to the Tortolita Basin Management Plan. The project site is located in a critical basin, but the overall development density will be less than one house per acre. Onsite retention/detention is not required for this land use density.

Exhibit II.J.1: Post Development Hydrology



SUBJECT TO DEVELOPMENT REGULATIONS IN SECTION III

THE PLANNING CENTER
110 S. CHURCH AVE., SUITE 1250
TUCSON, AZ 85701 (520) 623-6148

0' 500' 1000'

K. ENVIRONMENTAL RESOURCES AND CONSERVATION

The SKYRANCH Specific Plan is designed as a private residential community integrated with the natural environment of the site. Due to the site's location in designated Pygmy Owl habitat, and in an effort to maintain portions of this area as habitat, the developer will submit a Custodial Plan to address habitat conservation in accordance with guidelines established by the U.S. Fish and Wildlife Service. The Custodial Plan for SKYRANCH requires conservation of 80 percent of lands within the project site in perpetuity for the preservation of habitat resources.

The Custodial Plan will address the transference and ownership of these lands to a custodial agency, as well as a program for its implementation, and the guidelines for the operation and maintenance of conservation areas. This Custodial Plan is based on the Habitat Conservation Plan currently being prepared for the U.S. Fish and Wildlife Service for this site. The Habitat Conservation Plan is required as part of the Section 10 process of the U.S. Fish and Wildlife Service and is currently under review. These lands will be administered and maintained by the same or separate custodial agencies and in cooperation with the U.S. Fish and Wildlife Service.

The SKYRANCH Custodial Plan shall implement the recommendations of the approved resource based Habitat Conservation Plan. A full copy of those recommendations will be provided to the Town under separate cover.

The environmental concept envisioned for SKYRANCH relies on interaction and public-private partnerships between the owners of SKYRANCH, their Home Owners Association, as well the custodial agency that will act to implement management guidelines. Through partnering, it is envisioned that property owners will partake in the stewardship of this valuable habitat, and promote its preservation.

L. LANDSCAPE ELEMENT

The overall goal of landscaping in SKYRANCH is to maintain a desert theme, incorporating plant materials indigenous to, and blending in with, the Sonoran Desert. Natural buffers will be maintained along all roadways abutting and within the site.

A separate SKYRANCH Landscape Preservation Plan will be submitted to the Town under separate cover that addresses, among other landscape related requirements, maintenance and preservation of native plants and habitat, revegetation, and methods, parameters, and processes for landscape plan approval. This plan shall pertain to areas disturbed during development.

M. RECREATION CONCEPT

The SKYRANCH Specific Plan will support the objectives of the Pima County Trail System Master Plan and the Town of Marana Parks, Trails, and Open Space Master Plan by increasing linkages to the surrounding area, and by providing residences of SKYRANCH enjoyment of significant open spaces.

A minimum of 80% of the Specific Plan site will be left in a natural state. Existing washes on the site will not be modified for pedestrian or equestrian trail access or use. However, these washes are currently used as walking and equestrian paths, and may be enjoyed as such by SKYRANCH residents. These existing wash paths are illustrated on Exhibit II.M.1: Trails Concept Plan.

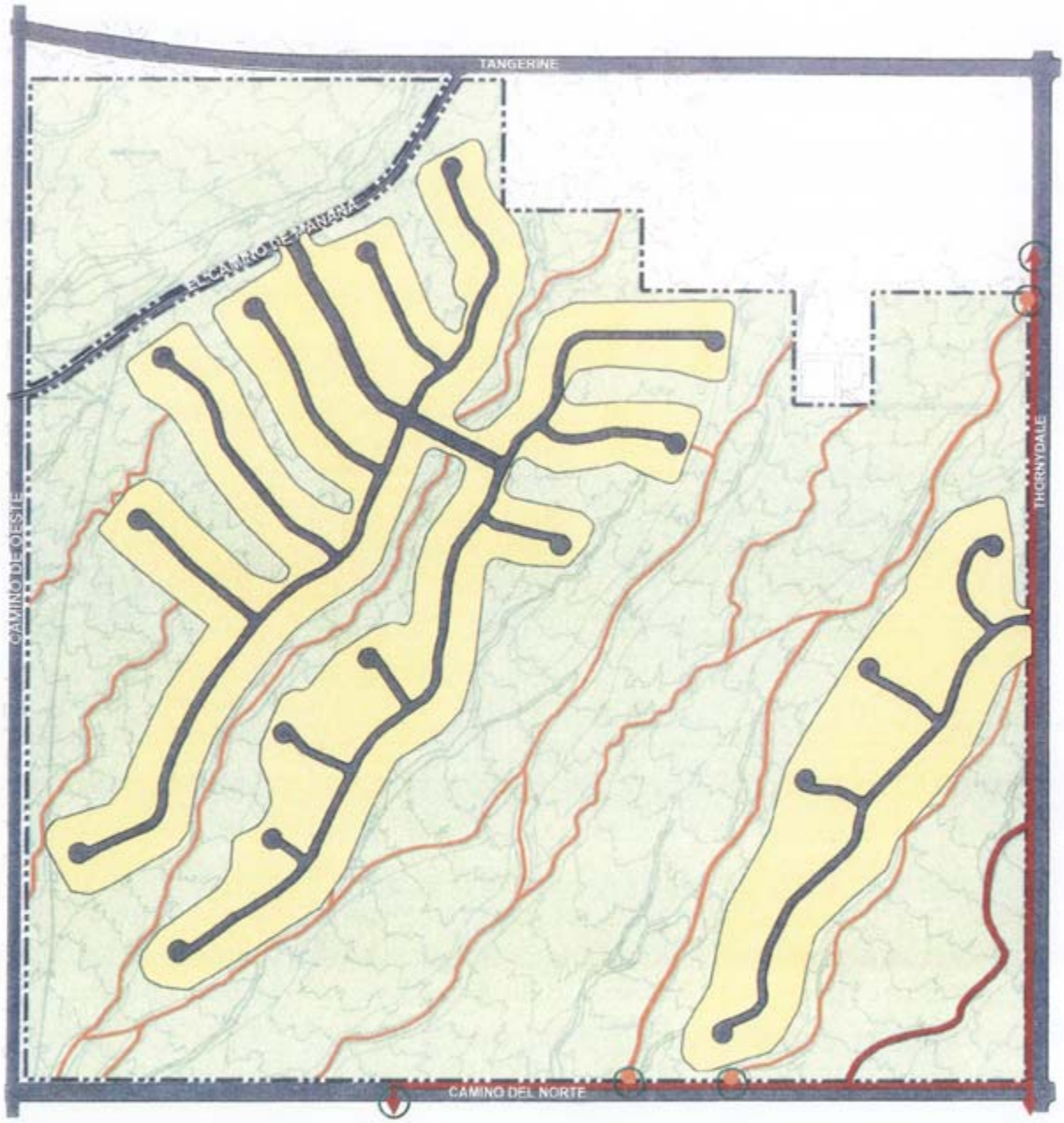
Two public trails, the Thornydale Trail on Thornydale Road, and the Ironwood Trail that crosses the southeast corner of the site and links with Camino Del Norte south of the site, will provide for public access through and around SKYRANCH.

In accordance with the guidelines set forth by the U.S Fish and Wildlife Service, new internal trails in SKYRANCH will not be developed.

Due to the environmental sensitivity of this project, no parks will be provided. In keeping with the U.S. Fish and Wildlife Service recommendations, this site will remain predominantly a natural setting with opportunities for walking, wildlife observation, and passive recreation.

However, the developer will contribute fees in-lieu of an actual park site. The amount and parameters surrounding these fees will be addressed in a separate development agreement.

Exhibit II.M.1: Trails Concept Plan



* ACTUAL LOTS AND ROAD ALIGNMENTS ARE SUBJECT TO THE DEVELOPMENT REGULATIONS AS SET FORTH IN SECTION III.D OF THE SPECIFIC PLAN.

LEGEND

- RESIDENTIAL AREAS
- NATURAL AREA
- PUBLIC TRAIL
- EXISTING WASH TRAIL
- CONNECTION TO EXISTING PUBLIC TRAIL

THE PLANNING CENTER

N. CULTURAL RESOURCES

An on-the-ground survey of the property was conducted by the Arizona State Museum in 1981, yielding one recorded site (See the Site Analysis, Section I for more information). The Arizona State Museum recommended further investigation of the site. Following that suggestion, P.A.S.T. Archaeology Consultants was contracted to do a follow up survey of the entire site, including the previously recorded site. Preliminary results of that survey are being reviewed by the Arizona State Museum and a detailed report will be submitted to the Town under separate cover.

O. VIEWSHEDS

This project is situated to have little or no effect on viewsheds from adjoining properties. Views and vistas of both the existing on-site vegetation and significant off-site features such as the Tortolita Mountains will not be inhibited by this project, due in part by the large site area, relatively flat terrain, and existing vegetation along the project boundaries.

Homes will be sited to take advantage of distant views of the Catalina Mountains, Tortolita Mountains, and on-site vegetation. A natural buffer will be maintained along the property perimeter and along major arterials, helping to maintain the existing rural character of the area.

P. PUBLIC UTILITIES

1. Sewer:

Sewer service for SKYRANCH will connect to existing public sewer lines in Camino de Oeste. Sewer line extensions will extend within the right-of-way of Camino del Norte and Camino de Oeste and connect to the SKYRANCH neighborhoods at three locations. (See Exhibit II.P.1: Utilities Plan). Access to the sewer manholes in those lines will be provided via all-weather access from the roadways internal to the project site.

2. Schools:

The closest school to the site is the Richard B Wilson Junior High School (K-8) located at 2330 W. Glover Street about 1.75 miles to the east of the site. The closest high school to the site is the Mountain View High School located at 3901 W. Linda Vista Boulevard approximately 2 ¼ miles south of the site. The nearest Marana Unified School District Elementary School is Ironwood Elementary School located approximately 2 1/4 miles south of the site at 3300 W. Freer Dr.

Using formulas from the Town of Marana School District, this project could generate approximately 440 school-aged children

K – 6: ½ x 440 units = 220 school aged children
7-12: ½ x 440 units = 220 school aged children

Due to the environmental sensitivity of this project, no school site will be provided. However, the developer will contribute fees in-lieu of an actual school site. The amount and parameters surrounding these fees will be addressed in a separate development agreement.

3. Fire / Emergency Vehicle Service:

Emergency vehicle access for the larger of the two residential areas will be accommodated within the right-of-way of the entrance boulevard. This entrance has been designed to allow the passage of emergency vehicles into the project site by means of a divided two-lane roadway with a median. SKYRANCH will be a gated community, however, NW Fire Department officials and police officials will have electronic opening devices or by-pass codes to ensure 24-hour access.

Additional safety measures in SKYRANCH are being taken to address emergency access concerns. Ongoing discussions with the NW Fire Department staff indicate that measures can be taken to address fire and emergency issues. The SKYRANCH development may include several of these recommendations. Possible measures include the requirement that standpipes for fire equipment hook-up be provided within the internal streets right-of-way, and/or limiting the individual building square footages to maintain the residential standards for fire water flow at 1000 gallons per minute (gpm).

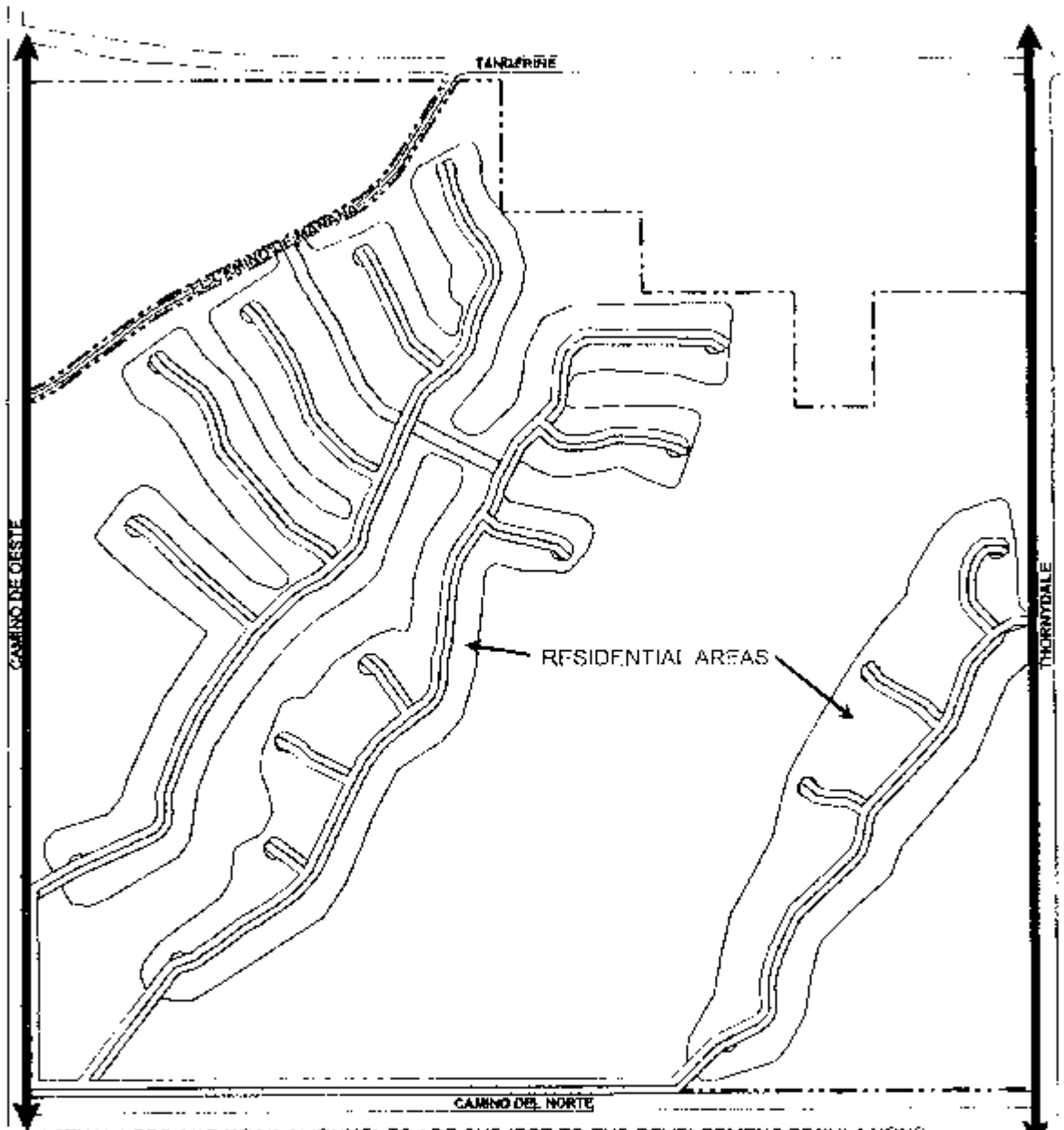
Secondary emergency access will be provided from two points along Camino del Norte within sewer lines access/maintenance easements. Where sewer lines are extended from Camino del Norte to service SKYRANCH, the easements will be 14 feet wide.

A third emergency access point from Camino de Oeste will be via the proposed sewer access/maintenance easement and will be 14 feet wide.

4. Water Service:

Water service for SKYRANCH will be determined through a water service agreement either between the Town of Marana or Tucson Water and the developer. It is envisioned that water service for SKYRANCH will be provided by one of three means: the use of an existing protected main controlled by Cottonwood Properties and owned by Tucson Water located in Thornydale Road, or by a new extension of an existing main in W. Naranja Drive, or by drilling new private wells.

Exhibit II.P.1: Utilities Concept Plan



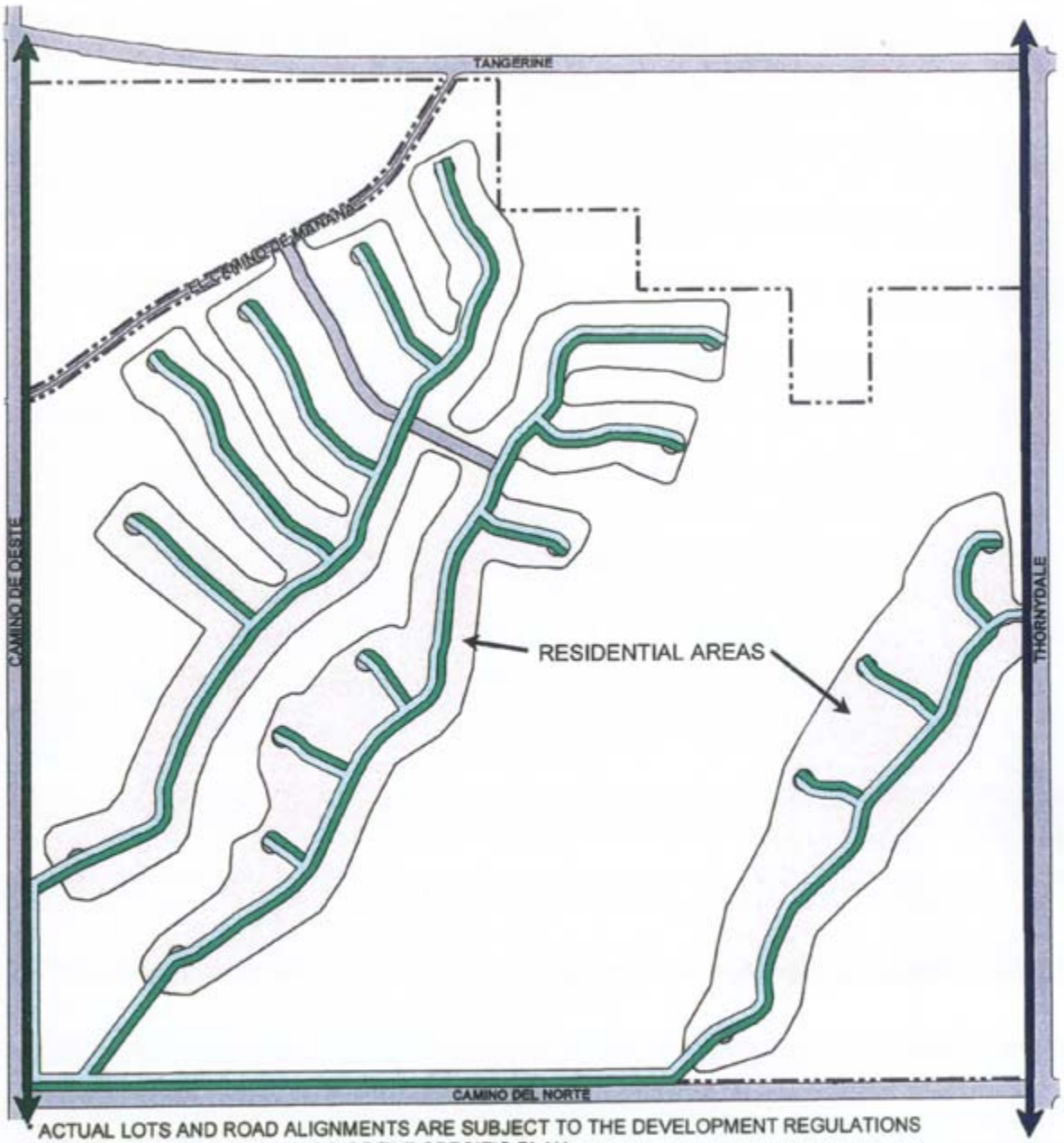
ACTUAL LOTS AND ROAD ALIGNMENTS ARE SUBJECT TO THE DEVELOPMENT REGULATIONS AS SET FORTH IN SECTION III.D OF THE SPECIFIC PLAN

LEGEND

- Existing 15" Diameter Sewer
- Existing Protected Tucson Water Main
- Proposed Sewer Extension
- Proposed Water Line Extension

THE PLANNING CENTER

Exhibit II.P.1: Utilities Concept Plan



ACTUAL LOTS AND ROAD ALIGNMENTS ARE SUBJECT TO THE DEVELOPMENT REGULATIONS AS SET FORTH IN SECTION III.D OF THE SPECIFIC PLAN.

LEGEND

- Existing 15" Diameter Sewer
- Existing Protected Tucson Water Main
- Proposed Sewer Extension
- Proposed Water Line Extension

THE PLANNING CENTER

Section III
Development Regulations

A. Purpose and Intent

These regulations will serve as the primary mechanism for implementation of the land uses for SKYRANCH. The SKYRANCH Specific Plan Development Regulations establish the intensity and character of the development by prescribing site-specific development standards that are tailored to the unique qualities of the project. The regulations contained within this section provide an appropriate amount of flexibility to anticipate future needs and to achieve compatibility with surrounding land uses.

The SKYRANCH Specific Plan proposes a gated residential subdivision that is more harmonious with its natural setting than traditional subdivisions developed under R-6, R-8, R-144, or other large lot zoning. As a residential development, SKYRANCH will utilize state of the art planning techniques to develop in sensitive areas and create safeguards for natural resources within the planning area. The Plan represents cohesion between protecting habitat while providing appropriate community growth.

These development regulations apply to the 511.28 acres of land in SKYRANCH currently under the jurisdiction of the Town of Marana. and shall apply to the 5.51acres of land at the northeast corner upon annexation into the Town of Marana. Annexation is currently in process.

B. Applicability of Town of Marana Zoning Code

If an issue, condition or situation arises or occurs that is not addressed by this Plan, the applicable portions of the current Town of Marana Zoning Code shall apply.

C. Definitions

Temporary Nursery: A nursery for the storage and protection of on-site native protected plant species relocated or otherwise disturbed during the development of SKYRANCH. This nursery shall be dismantled and revegetated in accordance with the SKYRANCH Landscape Preservation Plan within 3 months of relocating protected plants to their final sites.

Adjusted Gross: The adjusted gross is the sum of all land in SKYRANCH after adjacent roadway rights-of-way have been deducted. The adjusted gross figure is the basis for determining the allowable disturbance acreage.

D. Development Regulations

The project shall be limited to a maximum of 440 dwelling units.

Maximum Total Disturbance of SKYRANCH: Not to exceed 20% of the Adjusted Gross acres of the SKYRANCH site.

Residential
The following regulations shall apply to the Residential Area Designation (RA):

1. Permitted Uses:

    A. Site Built Residential Dwelling Units
    B. Community Recreation Facilities
    C. Public Trails
    D. Parking
    E. Utilities
    F. Emergency Access Drives

2 Accessory Uses:

    Residential Accessory Uses. The following accessory buildings and uses may be located on the same lot with a permitted dwelling, provided that any permanent building or structure shall be harmonious with the architectural style of the main building and further provided that all residential uses are compatible with the residential character of the neighborhood:

    a. Children's playhouse;
    b. Greenhouse or lathhouse;
    c. Non-commercial hobby shops;
    d. Patios and Cabanas;
    e. Swimming pools, spas, and related structures;
    f. Tool shed.

    Project Accessory Uses:

    a. Swimming pools in a common recreational area;
    b. Community recreation uses, including tennis courts, bath house, recreation building patio shelters and other community facilities common to a homeowner association.
    c One (1) Temporary Nursery

3. Development Standards:

    A. Minimum Lot Area: 6,000 square feet

B. Lot Setbacks:

1. Front yard:

a. Living area: minimum ten (10) feet
b. Garage (side entry): minimum ten (10) feet
c. Garage (front entry): minimum twenty (20) feet
d. No more than three (3) contiguous lots shall incorporate the same front setback
e Where setbacks vary, they must vary by at least five (5) feet
f. Fifteen (15) feet is the minimum setback for the second story elements

2 Separation between buildings: minimum 10 feet
3. Street side yard: minimum 15 feet
4. Rear yard: minimum 15 feet

C. Maximum Building Height: 30 feet

Open Space

Open Space Regulations shall apply to the Open Space Designation (O/S) (total land outside the developed portion of the RA areas). The O/S shall be no less than 80 % of the total land area of the entire site. The lands within the O/S area shall be preserved as natural undisturbed areas.

2. Permitted Uses:

E. Unimproved Public Trails

3. Environmental standards:

A. The open space land use designation shall be preserved for habitat mitigation.

B. All disturbed areas will be landscaped or re-vegetated in accordance with the SKYRANCH Landscape Preservation Plan.

C. Natural open space areas of vegetation designated to be preserved shall be protected during grading and construction activities by fencing and flagging, and in accordance with the SKYRANCH Landscape Preservation Plan.

4. Maintenance:

   E. A Custodial Plan shall be developed to transfer and manage all O/S areas and undeveloped RA areas to a custodial agency to ensure continued preservation of these lands.

   F. The Custodial Plan shall implement the guidelines of the U.S. Fish and Wildlife Service that relate to this site.

Minimum Roadway Development Standards

1. Application

   These minimum street standards are additions to the existing Town roadway standards and cross-sections and may be used in addition to the specified details of the Town roadway standards. All internal roadways shall be private roadways. owned by the SKYRANCH Homeowner's Association.

2. Functional Classifications Defined:

   Within SKYRANCH, the local streets may carry Average Daily Traffic Volumes (ADT) of up to 1,500. Design Speed for these local streets is 25 mph. Collector streets may carry ADT in the range of 1,500 to 2,500. The design speed for these streets shall be 35 mph. Direct access to lots is not permitted from collector streets

3 Cul-De-Sacs:

   Restrictions on the length of cul-de-sacs contained within the Town of Marana Street Standards do not apply to SKYRANCH. There is no restriction on cul-de-sac length. However, no cul-de-sac may serve more than 120 single-family homes or the equivalent development that would generate 1,200 average daily trips. The minimum turnaround right-of-way radius shall be forty-two (42) feet or four (4) feet beyond the minimum radius of backface of wedge curb. "T" and "Y" shaped turn-arounds may be used without curbs.

4. Curbing and Sidewalks:

   Roadway layouts in SKYRANCH should have minimum affect on existing drainage patterns in either sheet flow areas or defined channels. Wedge or ribbon curbs are appropriate for SKYRANCH and will be a minimum of 2 feet wide.

   Sidewalks in SKYRANCH shall be in accordance with Town of Marana standards

Landscaping or revegetation in accordance with the SKYRANCH Landscape Preservation Plan shall be employed to revegetate back to the edge of curb or sidewalk.

5. Travel Lanes:

In SKYRANCH, vehicular travel lanes are to be a minimum of fourteen (14) feet in width.

The two entry boulevards, with access solely off Camino de Marana and Thornydale Road, will have a minimum 60 foot right-of-way and will be constructed with one 20-foot lane in each direction and a divided median with a minumum size of 10 feet.

The local streets within SKYRANCH will have a minimum of 28 feet of pavement if streets are designed to accommodate visitor parking in the community

Section IV
Implementation and Administration

A. Purpose

The regulations and guidance contained within this Specific Plan prescribe the implementation of development on the SKYRANCH site. This chapter also provides information regarding general administration and amendment procedures.

For the purpose of identifying those responsible for implementation of the improvements for the SKYRANCH Specific Plan area, three entities must be identified. These are the Master Developer, the Builder, and the Custodial Agency.

The master developer is the entity responsible for ensuring the basic infrastructure facilities are planned and constructed to serve the development areas within the SKYRANCH Specific Plan. The Master Developer is also responsible for creating the Custodial Plan for the transference of relevant Open Space and undeveloped Residential Areas, designated herein, to a Custodial Agency prior to home occupancy.

The Builder is the purchaser of a development area, or portions of a development area, responsible to build or provide for building within their areas of ownership.

The Custodial Agency is the entity responsible for the maintenance and management of all Open Space (O/S) areas, and undeveloped Residential Areas (RA). Upon transference of said lands to the Custodial Agency, the Custodial Agency shall implement the recommendations set forth by the U.S. Fish and Wildlife Service for this site.

B. Proposed Changes to Zoning Ordinances

The Development Regulations section of the Specific Plan addresses only those areas that differ from the Town of Marana Land Development Code. If an issue, condition or situation arises that is not covered or provided for in this Specific Plan, those regulations of the Town of Marana Land Development Code that are applicable for the most similar issue, condition or situation shall be used by the Planning Director and the Development Services Administrator as the guidelines to resolve the unclear issue, condition or situation

C. Site Plan and Architectural Review Process

The Site Plan and Architectural Review process shall be outlined in a separate SKYRANCH Design Guidelines manual.

D. Development Review Procedure:

The development review procedure for SKYRANCH shall be implemented through the review and approval process of preliminary and final plats by the Town of Marana and through the Town of Marana building permit approval process. Final decisions on grading, drainage, final road alignment, revegetation and other matters will be made at the final plat stage.

Review process shall include the master developer as follows: No structures including signs, shall be erected, improved or altered, nor shall any grading, excavation, tree removal or any other work which in any way alters the exterior appearance of any structure or area of land be commenced unless it has been approved in writing by the master developer or designated Design Review Committee.

All proposed subdivisions within the SKYRANCH Specific Plan shall be required to submit plans to the Master Developer or DRC for approval prior to submitting to the Town for approval and permitting. Subdivision plats shall be approved by the Town of Marana in accordance with Town of Marana procedures.

Final plats shall require the approval of the Town Council.

E. General Implementation Responsibilities

The Specific Plan shall be implemented through the subdivision review process. This process will allow for the creation of lots as preliminary and final plat maps which allow for implementation of the project. The SKYRANCH Specific Plan will guide the platting process with other official Town of Marana ordinances, policies, maps, and regulations.

Implementation of the SKYRANCH Specific Plan shall be the responsibility of the developer, builders and the custodial agency in accordance with the regulations and guidance contained within the Specific Plan, unless otherwise noted. These entities shall be responsible for the engineering and implementation of the spine infrastructure. The spine infrastructure systems are defined as those systems that are necessary to provide development opportunities to the SKYRANCH site. These systems include access roads, residential collectors and associated streetscapes, trunk sewers, irrigation, water mains, electric lines, gas, fiber optics, and phone lines and cable television facilities in the major streets. Once these spine infrastructure systems are put into place the builder may be responsible for implementation of facilities within the spine infrastructure system that would be damaged or destroyed by secondary development if installed by the developer.

Approval of a subdivision plat, development plan, or building permit is subject to the following requirements:

1. Conformance with the SKYRANCH Specific Plan as adopted;

2. Provision of development-related agreements as required by applicable agencies;

3. Dedication of appropriate rights-of-way for roads, utilities, and drainage by plat, or by separate instrument if the property is not to be subdivided.

4. Individual CC&R's for each residential subdivision shall be recorded.

5. Adoption of Master CC&R's.

5. The maximum number of dwelling units in SKYRANCH shall not exceed 440 units.

F. Phasing

It is envisioned that this project will be developed as a cohesive, comprehensive development, achieved in one phase. Development will require significant investment in and installation of site infrastructure including utilities and roadway improvements for the entire developable area.

G. Specific Plan Administration

1. Enforcement

The SKYRANCH Specific Plan shall be administered and enforced by the Town of Marana Development Services Department in accordance with the provisions of the Town of Marana Land Development Code, and by the Custodial Agency for areas dedicated as Open Space in accordance with the guidelines set forth by the U.S. Fish and Wildlife Service for this site.

2. Administrative Change

Certain changes to the explicit provisions in the Specific Plan may be made administratively by the Planning Director or Development Services Administrator, providing said changes are not in conflict with the overall intent as expressed in the Plan. Any changes must conform to the goals and objectives of the Plan.

The Planning Director's or Development Services Administrator's decision regarding administrative changes and determination of substantial change as outlined below shall be subject to appeal to the Town Council. Categories of administrative change include, but are not limited to:

a. The addition of new information to the Specific Plan maps or text that does not change the effect of any regulations or guidelines, as interpreted by the Planning Director.

a. The addition of new information to the Specific Plan maps or text that does not change the effect of any regulations or guidelines. as interpreted by the Planning Director.

b. Changes to the community infrastructure planning and alignment such as roads, drainage, and water and sewer systems that do not increase the development capacity in the Specific Plan area.

c. Changes to development plan boundaries due to platting. Minor modifications to the boundaries and acreages of the planning areas or adjustments because of final road alignments and drainage will occur during technical refinements in the platting process and shall not require amendment to the Specific Plan.

d. Changes to development standards that are in the interest of the community and do not affect health or safety issues.

3. Substantial Change

a. This specific plan may be substantially amended by the same procedure as it was adopted. Each request shall include all sections or portions of the Specific Plan that are affected by the change. The Planning Director shall determine if the amendment would result in a substantial change in plan regulations, as defined in the Town of Marana Land Development Code.

4. Interpretation

The Planning Director shall be responsible for interpreting the provisions of this Specific Plan. Appeals to the Planning Director's interpretation may be made within fifteen (15) days from the date of the interpretation to the Town Council.

5. Fees

Fees will be assessed as indicated by the Town's adopted fee schedule that is in place at the time of development.

Bibliography

Town of Marana Rezone Procedural Guide and Application, March 1997

Marana Land Development Code:

Title 5 - Zoning, revised August 1995.
Title 10 - Procedures, revised August 1995.
Title 19 - Standards for Grading and Related Site Work. revised August 1995.
Title 20 - Protection of Native Plants. revised August 1995.

Pima County Hydrology Map, Pima County. Arizona

FIRM Map 1025. April 5, 1995

Eastern Pima County Trail System Master Plan

Aerial Photographs - Cooper Aerial and WLB Group

Zoning Map - Landiscor

Appendix

2000 Pima County Assessor Property Inquiry

PARCEL [redacted] Go

Appraiser JIM FORBUS

Book-Map-Parcel: 224-13-004F **TaxArea:** 0610 **TaxYear:** 2000

TaxPayer Information

EXETER LXI LLC

1750 E GLENDALE AVE STE 150

PHOENIX AZ

85014 0000

Legal Description

LOTS 3,4,&5 LYG NW OF EL CAMINO DE MANANA

EXC N50' 41.60 AC SEC 6-12-13

(FORMERLY 203-16-004F)

Recording Information

Docket 11287 **Page** 4009 **Date** 200004

Zoning Information MAR

Miscellaneous

Section 6 **Twn** 12.0S **Rng** 13.0E

LandMeasure 41.60 A

MarketArea: NORTH EAST MARAN

Tract Block Lot **Group**

CensusTract 4611 **UseCode** 0012

Date of Last Change Jun-30-2000

VACANT RESIDENTIAL UR

Secondary Valuation Data	LegislativeClass	FullCash	Percentage
Land	VACANT/AG(4 0)	$145,600	16.0
Improvements			
2000 Personal Property			
Gross Value Totals		$145,600	
2000 LMTD/SCND Exemptions			
Net Value Totals		$145,600	

PriorLimitedValue: $145,600 **CurrentLimitedValue:** $145,600

Recordings 10026^2258 11287^4009

Owner's Estimate 1998=$75,000 1997=$80,000

NoEC 1999~NoC

Appeals 1998(P) 1997(P)

2000 Pima County Assessor Property Inquiry

Search | 2001 | 1999 | Summary | Tax | Genealogy | ARM

PARCEL 224130043 Go

Appraiser JIM FORBUS

Book-Map-Parcel: 224-13-004E

TaxArea: 0610 TaxYear: 2000

TaxPayer Information

EXETER LXI LLC

1750 E GLENDALE AVE STE 150

PHOENIX AZ

85014 0000

Recording Information

Docket 11287 Page 4009 Date 200004

Zoning Information MAR

Miscellaneous

Section 6 Twn12.0S Rng13.0E

LandMeasure 5.38 A

MarketArea: NORTH EAST MARAN

Legal Description

IRR PTN LOTS 3 & 4 LYG SE OF EL CAMINO DE MANANA

EXC E600' 5.38 AC SEC 6-12-13

Tract Block Lot Group

CensusTract 4611 UseCode 0012

Date of Last Change Jun-30-2000

(FORMERLY 203-16-004E)

VACANT RESIDENTIAL UR

Secondary Valuation Data	LegislativeClass	FullCash	Percentage
Land	VACANT/AG(4 0)	$18,830	16.0
Improvements			
2000 Personal Property			
Gross Value Totals		$18,830	
2000 LMTD/SCND Exemptions			
Net Value Totals		$18,830	

PriorLimitedValue: $18,830

CurrentLimitedValue: $18,830

Recordings 10026^2258 11287^4009

Owner's Estimate 1998=$10,000 1997=$10,000

NoEC 1999-NoC

Appeals 1998(P) 1997(P)

2000 Pima County Assessor Property Inquiry

Search | 2001 | 1999 | Summary | Tax | Genealogy | ARM

PARCEL 224130030 Go

Appraiser JIM FORBUS

Book-Map-Parcel: 224-13-0030 **TaxArea:** 0610 **TaxYear:** 2000

TaxPayer Information

EXETER LXI LLC

1750 E GLENDALE AVE STE 150

PHOENIX AZ

85020 0000

Recording Information

Docket 7725 **Page** 586 **Date** 19860220

Zoning Information MAR

Miscellaneous

Section 6 **Twn**12.0S **Rng**13.0E

LandMeasure 12.02 A

MarketArea: NORTH EAST MARAN

Tract Block Lot **Group**

CensusTract 4611 **UseCode** 0012

Date of Last Change Jul-23-1997

Legal Description

E 600' OF L 3 LYG S OF EL CAMINO DE MANANA EXC 30' ON S & E EXC N50' 12.02 AC SEC 6-12-13

(FORMERLY 203-16-0030)

VACANT RESIDENTIAL UR

Secondary Valuation Data	LegislativeClass	FullCash	Percentage
Land	VACANT/AG(4 0)	$84,140	16.0
Improvements			
2000 Personal Property			
Gross Value Totals		$84,140	
2000 LMTD/SCND Exemptions			
Net Value Totals		$84,140	

PriorLimitedValue: $67,763 **CurrentLimitedValue:** $74,539

Recordings 7725^586 11328^2501

2000 TaxRoll has been Billed.

Pima County Assessor ~ 115 N. Church ~ Tucson Az. 85701

Client: ~ 209.181.121.163

2000 Pima County Assessor Property Inquiry

Search | 2001 | 1999 | Summary | Tax | Genealogy | ARM

PARCEL 224130020 Go

Appraiser JIM FORBUS

Book-Map-Parcel: 224-13-0020 **TaxArea:** 0610 **TaxYear:** 2000

TaxPayer Information

EXETER LXI LLC

1750 E GLENDALE AVE STE 150

PHOENIX AZ

85020 0000

Legal Description

N370' OF S400' OF E630' OF W660' OF LOT 2 5.35 AC

SEC 6-12-13

(FORMERLY 203-16-0020)

Recording Information

Docket 7725 **Page** 586 **Date** 19860220

Zoning Information MAR

Miscellaneous

Section 6 **Twn**12.0S **Rng**13.0E

LandMeasure 5.35 A

MarketArea: NORTH EAST MARAN

Tract Block Lot **Group**

CensusTract 4611 **UseCode** 0012

Date of Last Change Jul-23-1997

VACANT RESIDENTIAL UR

Secondary Valuation Data	LegislativeClass	FullCash	Percentage
Land	VACANT/AG(5 0)	$37,450	16.0
Improvements			
2000 Personal Property			
Gross Value Totals		$37,450	
2000 LMTD/SCND Exemptions			
Net Value Totals		$37,450	

PriorLimitedValue: $30,161 **CurrentLimitedValue:** $33,177

Recordings 7725^586 11328^2501

Affidavit of	FeeNumber	SaleDate	PropertyType	SaleS	Cash$	Validation	Financin
Sale	1240720	02 2000	Vacant Land	$172,000	$0	R3 JAC	None
	Buyer/Seller Related DEED: Special Warranty Deed (R3 = BUYER/SELLER ARE RELA CORPORATE ENTITIES.)						
Sale	21072	09 1985	Vacant Land	$345,286	$95,200	X ZZZ	New Loa
	DEED: Warranty Deed (X = Good Sale)						

2000 Pima County Assessor Property Inquiry

Search | 2001 | 1999 | Summary | Tax | Genealogy | ARM

PARCEL 224130045 Go

Appraiser JIM FORBUS

Book-Map-Parcel: 224-13-004J

TaxArea: 0610 **TaxYear:** 2000

TaxPayer Information

EXETER LXI LLC

1750 E GLENDALE AVE STE 150

PHOENIX AZ

85014 0000

Recording Information

Docket 11287 **Page** 4009 **Date** 200004

Zoning Information MAR

Miscellaneous

Section 6 **Twn**12.0S **Rng**13.0E

LandMeasure 189.93 A

MarketArea: NORTH EAST MARAN

Tract Block Lot **Group**

CensusTract 4611 **UseCode** 0012

Date of Last Change Jun-30-2000

Legal Description

E30' LOT 3 EXC N50' & S30' LOT 1 EXC E30' S30' LOT 2 & S3988' E2 EXC S660' & EXC E30' & EXC S400' N2048.24' W600' E630' & EXC W400' E1210' N630' 189.93 AC SEC 6-12-13

(FORMERLY 203-16-004A)

VACANT RESIDENTIAL UR

Secondary Valuation Data	LegislativeClass	FullCash	Percentage	
Land	VACANT/AG(4 0)	$664,755	16.0	$
Improvements				
2000 Personal Property				
Gross Value Totals		$664,755		$
2000 LMTD/SCND Exemptions				
Net Value Totals		$664,755		$

PriorLimitedValue: $664,755 **CurrentLimitedValue:** $664,755

Recordings 10026^2258 11287^4009

Owner's Estimate 1998=$300,000 1997=$350,000

NoEC 1999--NoC

Appeals 1998(P) 1997(P)

2000 Pima County Assessor Property Inquiry

Search | 2001 | 1999 | Summary | Tax | Genealogy | ARM

PARCEL 224130043 Go

Appraiser JIM FORBUS

Book-Map-Parcel: 224-13-004D **TaxArea:** 0610 **TaxYear:** 2000

TaxPayer Information

EXETER LXI LLC

1750 E GLENDALE AVE STE 150

PHOENIX AZ

85014 0000

Recording Information

Docket 11287 **Page** 4009 **Date** 200004

Zoning Information MAR

Miscellaneous

Section 6 **Twn**12.0S **Rng**13.0E

LandMeasure 255.00 A

MarketArea: NORTH EAST MARAN

Tract Block Lot **Group**

CensusTract 4611 **UseCode** 0012

Date of Last Change Jun-30-2000

Legal Description

S30' W570' E600' LOT 3 & LOT 5 LYG SE OF EL CAMINO DE MANANA & LOTS 6 & 7 & SE4 OF NW4 & E2 OF SW4 & S2 OF S2 OF SE4 EXC E30'

255.00 AC SEC 6-12-13

(FORMERLY 203-16-004D)

VACANT RESIDENTIAL UR

Secondary Valuation Data	LegislativeClass	FullCash	Percentage	
Land	VACANT/AG(4 0)	$892,500	16.0	$
Improvements				
2000 Personal Property				
Gross Value Totals		$892,500		$
2000 LMTD/SCND Exemptions				
Net Value Totals		$892,500		$

PriorLimitedValue: $892,500 **CurrentLimitedValue:** $892,500

Recordings 10026^2258 11287^4009

Affidavit of	FeeNumber	SaleDate	PropertyType	SaleS	Cash$	Validation	Financin
Sale	830938	01 2000	Vacant Land	$3,000,000	$2,000,000	X JAC	UnKnow

DEED: Quit Claim Deed (X = Good Sale)

APPENDIX B

CULTURAL RESOURCES

PAST
PROFESSIONAL ARCHAEOLOGICAL SERVICES AND TECHNOLOGIES

March 10, 2001

Mr. Jack Neubeck
The Planning Center
110 S. Church #1260
Tucson, AZ 85701

RE. Report for Skyranch
Archaeological Survey

PAST Job No. 001269

Dear Mr. Neubeck:

Introduction. Personnel from P.A.S.T. conducted a 8 personday, approximately 503 acre survey of the Skyranch property on 12/28-31/00 and 1/1-5/01 located in Pima County near Tucson in anticipation of residential development. The purpose of the project was to determine whether any significant cultural resources that might be adversely impacted by construction were present

Background To Study Area: Description & Location. The project area is located in the northwest portion of the Tucson Basin (Figure 1) within the Basin and Range physiographic province at an approximate elevation of 2,600 feet. Project area vegetation is typical of the Arizona Upland subdivision of the Sonoran Desertscrub biotic province (Turner and Brown 1982) with Palo Verde, Bursage and Prickly Pear predominant. The location with respect to the Public Land Survey is a Portion of Sec. 6 T12S R13E G&SRB&M. **Records Review.** A review of the records of the Arizona State Museum (ASM), prior to the survey revealed that the subject parcel had undergone an archaeological survey in 1981 and archaeological site AZ AA:12:200 (ASM) is located on the inspected parcel.

Culture History. Recent archaeological studies outside of the American Southwest indicate that humans had arrived at the southern end of South America by 10,500 B.C. and may have been present in the eastern United States as early as 12,000-13,000 B.C. However, the earliest well dated sites in Arizona and the Southwest are those attributed to the Clovis culture, part of a "Paleoindian" tradition dated to about 9,800 B.C. By about 7,500 B.C. the Paleoindian tradition had been replaced or evolved into what is known as the Archaic tradition, in which subsistence was based on both hunting and gathering of wild resources. Paleoindian and Archaic archaeological sites typically exhibit only stone artifacts, because pottery had not yet been introduced into Arizona during these early times and items made of wood and other perishable materials have not been preserved.

The introduction of ceramics to the region one or two centuries before Christ marks the beginning of the Formative tradition in which people began to rely on agriculture and live a more sedentary lifestyle. The Hohokam culture, which is the primary Formative culture in the project area, is known for its red-on-buff and red-on-brown painted pottery, elaborate artifacts made of ground and carved stone and seashells, houses built inside of shallow pits, and communal structures known as ballcourts and platform mounds.

Around 1450 the Hohokam tradition came to an end. By the time the first Europeans (Spanish soldiers and missionaries) entered southeastern Arizona in the late seventeenth century the region was occupied primarily by the Sobaipuri and Tohono O'odham Indians, whose material culture appears to have been much less complex than that of the earlier Hohokam. Between 1700 and 1850 Apache Indians moved into the area and raided extensively, so Europeans did not begin settling the area until after the raiding threat was removed in the 1870s.

Consulting Archaeologists
P.A.S.T.
5036 E. Golder Ranch Road
Tucson Arizona
85739-9602 USA
Telephone 520. 825.3536
Fax 520. 825.2636
Email past@azstarnet.com

Survey Expectations. This project's study area was located in a portion of the greater Tucson Basin that is conducive to prehistoric and/or historical settlement. Therefore, it was considered a reasonable likelihood that prehistoric or historical sites would be found during the survey. Although the land had previously been surveyed as part of the Tucson Basin Survey, given the amount of time since the original survey and changes to the Arizona State Museum's site definition policy, an updated survey of the property was warranted.

Cultural Resources Survey: Methods. The field work consisted of an intensive on-foot coverage of the property by our staff in order to identify and locate any cultural resources, historic or prehistoric, within the property boundaries. Field personnel (T. Wyman & A. Lenhart)were spaced approximately 20 meters apart and crossed the subject property in a series of contiguous corridors with any areas of extreme slope covered less intensively. General conditions were very good for conducting the fieldwork. Ground visibility was moderately effected by the presence of trees shrubs, semi-shrubs, succulents and grasses. The original land-form was minimally disturbed by historic alterations to the ground surface.

Survey Results. Other than AZ AA:12:200 (ASM) there were no surface indications of archaeological resources on the property which meet the Arizona State Museum minimum standard for recording as an archaeological site or that would be eligible for inclusion in the National Register of Historic Places. Recent cultural manifestations identified during the survey include off-road vehicle trails, informal foot paths and a light scatter of trash. All are modern in origin.

AZ AA:12:200 (ASM). This site was described as a Hohokam ceramic scatter approximately 25 meters in diameter located in an area of eroding terrain. Some sherds were displaced in small washes and others in larger drainages. Collections were made but the artifact counts are not noted on the site card. The depth of the site was not established. The site was recorded in January of 1981 by Kathy Irwin. Recovery Notes: The site was revisited during the current resurvey of the property. Less than 15 sherds were found, from two different vessels. It appears erosional processes over the past 20 years have unearthed few additional artifacts and continued to deflate the area of the site. Between collection of the artifacts and continuing erosion little remains of this resource. There is no indication of sub-surface materials present on the site.

Criteria for Significance Evaluation. Archaeological and historical sites generally are not considered significant unless they are eligible for listing in the National Register of Historic Places. To be listed in the National Register a historic property normally must be at least 50 years of age and must be significant according to the following definition:

> The quality of *significance* in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and: A) that are associated with events that have made a significant contribution to the broad patterns of our history; or; B) that are associated with the lives of persons significant in our past; or C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction, or D) that have yielded, or may be likely to yield, information important in prehistory or history [National Park Service 1986].

Significance Assessment. Given the present condition of site AZ AA:12:200 no further meaningful information can be derived from this site. It appears the information associated with this resource was fully collected during the 1981 recordation process. As a consequence no important cultural materials more than 50 years old remain in the project area. Accordingly there are no significant cultural resources in the area inspected for this project.

Evaluation Of Effects Of The Proposed Project. Development of the inspected parcel will not have an effect on significant cultural resources.

Recommendations. Based on the archival information, field methods, the observable surface indications and because none of the materials observed on the subject property have potential to provide important archaeological or historical information beyond what was obtained for this project, P.A.S.T. supports approving the sponsor's application. Although P.A.S.T. does not endorse additional archaeological studies for this project, ground disturbing activities on the property should not commence without

authorization by the agency archaeologist(s). There remains the possibility that ground disturbing activities could reveal the presence of heretofore undiscovered cultural resources. If such materials are discovered construction activities should stop. Consultation should be initiated with the cognizant agency archaeologist, and if applicable under ARS §41-841 *et seq.* the Arizona State Museum, to assess the potential significance of any materials unearthed. Under State law (ARS 41-§865 & .§41-844) if human skeletal remains or funerary objects are discovered on either public or private lands the Arizona State Museum should be contacted immediately

Thank you for the opportunity to work with you on this project. If I may be of any further assistance please do not hesitate to contact me.

Sincerely,

David V. M. Stephen
Archaeologist

State Antiquities Permit No. 2001-525l

Consulting
Archaeologists

P.A.S.T.
5036 E. Golder Ranch Road
Tucson, Arizona
85739-9602 USA

Telephone 520. 825.3536
Fax 520. 825.2636
Email past@azternet.com

P.A.S.T. ABSTRACT & PROJECT SUMMARY FORM

P.A.S.T. JOB NO. 001269

(Part 1 of 2 – refer to report narrative part for additional information)

A. INTRODUCTION

Agency Name:	Town of Marana		
Agency Reference:	None Provided		
Project Title:	Skyranch Project		
Project Description:	The land is slated for residential development.		
Project Sponsor:	The Planning Center		
ASM Permit No.	2001-52b1	Other Permits:	na

B. PROJECT LOCATION INFORMATION (see also attached copy of USGS map)

County:	Pima	Vicinity of	Tucson	AZ
Land Ownership	Private	Type		
Legal:	Portion Sec 6 T12S R13E G&SRB&M			

AZ QUAD	USGS MAP NAME	MAP SCALE
1. AA:12 NE	Ruelas Canyon (99CD)	7.5'
2.		

C. SURVEY INFORMATION

Type:	Non-collection pedestrian survey with systematic 20 meter transects or equal	Persondays	8
503 acres AND/OR 0 miles long BY 0 foot wide right-of-way		Percent of area surveyed	100%
Field Crew:	T. Wyman & A. Lenhart	Project Director:	David Stephen
Dates of Field Work:	12/28-31/00 and 1/1-5/01	Ground visibility was effected:	moderately
Additional Survey Records Submitted:	None	Artifact Collections Submitted to ASM:	None

D. CULTURAL RESOURCES WITHIN PROJECT AREA (see report narrative for additional information)

Archives Researched:	ASM ☒	AZSITE ☐	SHPO ☐	GLO ☐	MNA ☐	Other:

Numbers of eligible sites:	None	Numbers of ineligible sites:	AZ AA:12:200	
Previously recorded sites:	1	New sites found this project:	0	
Artifact scatters:	0	Total sites:	1	
Ref. To Prior Surveys	Tucson Basin Survey	Isolate density/total artifacts	<1 per acre	13
Sites within 100 meters:	None			

E. RECOMMENDATIONS FOR FURTHER WORK (see comments below and report narrative for further information)

FURTHER WORK RECOMMENDED	NONE						
RECORDING	☐	MONITORING	☐	SUB-SURFACE TESTING	☐	DATA RECOVERY	☐

F. COMMENTS (see narrative on other page for additional information)

An on-foot cultural resources survey of private property (503 acres) near Tucson in Pima county identified AZ AA:12:200 and 13 isolated sherds. Site AZ AA:12:200 was relocated but has been all but destroyed by erosion. No further meaningful information can be obtained from this resource. The quantity of artifacts within the subject property and data about known sites on adjacent lands suggests no cultural resources will be impacted by the undertaking. Based on the field work and archival documentation, the project sponsor should be allowed to develop the subject property without further cultural resource studies.

References

National Park Service

1986 *Guidelines for Completing National Register of Historic Places Forms* Bulletin No. 16. National Register of Historic Places. Department of the Interior, Washington, D.C.

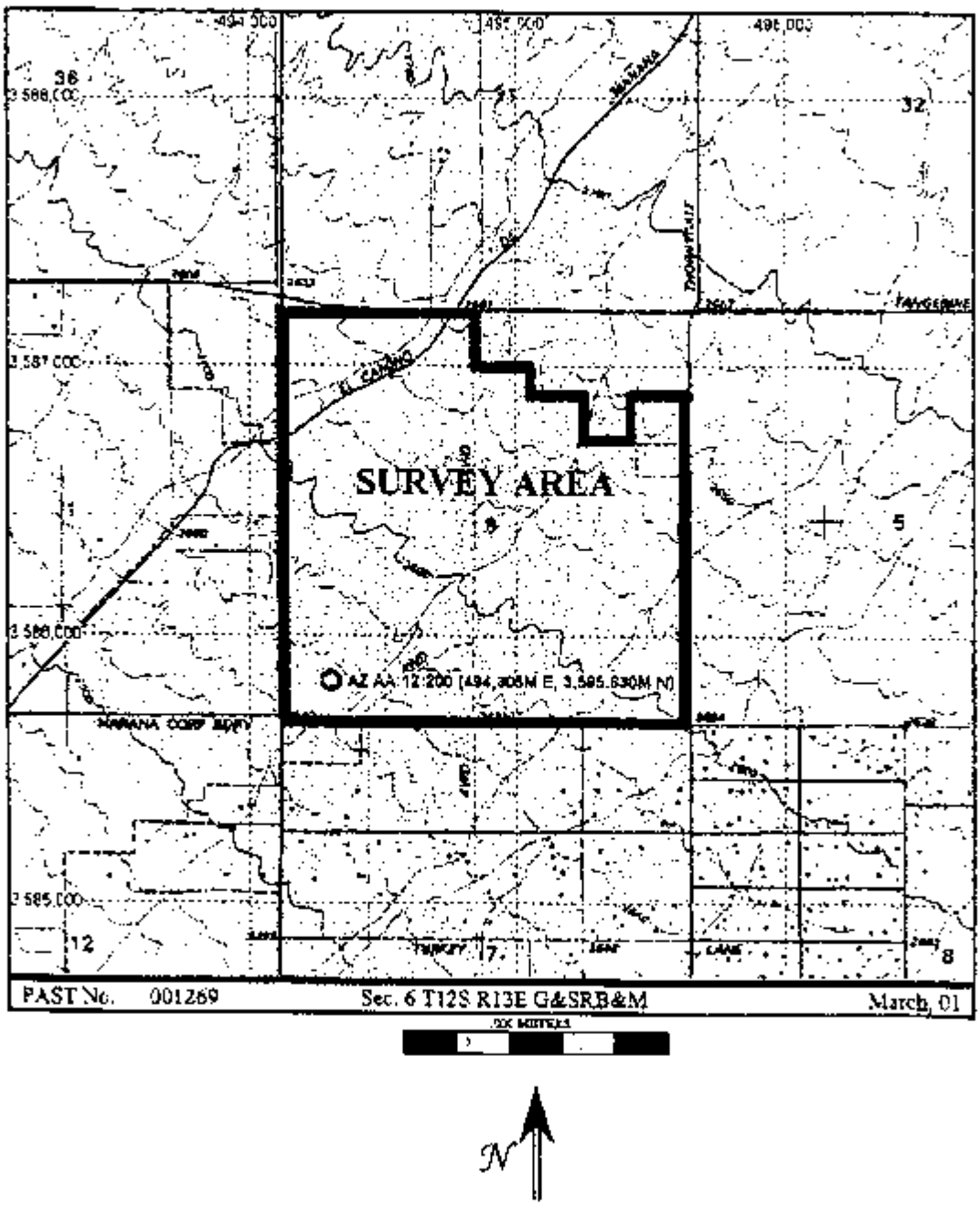
Turner, Raymond M., and David E. Brown

1982 Sonoran Desertscrub. In "Biotic Communities of the American Southwest - United States and Mexico," edited by David E. Brown, pp. 181-221. *Desert Plants* 4. University of Arizona for Boyce Thompson Southwestern Arboretum, Superior, Az.

Form Completed By David Stephen	Form Rev. 1/01	Date 03/10/2001

U.S.G.S. 7.5' MAP

Ruelas Canyon (99CD) AA:12 NE



APPENDIX C

SKYRANCH MARKETING FLYER

Skyranch

Skyranch... *living with nature*

Skyranch offers a new solution to the issues of private ownership and conservation...and an opportunity to live with nature, not just in nature. Here, in this pristine Sonoran Desert habitat, residents live side by side with spectacular natural plant and wildlife, including the endangered pygmy-owl.

The development of Skyranch has followed a pioneering path. Partnering with the U.S. Fish and Wildlife Service, developers have created a plan that will allow residents to coexist with our natural environment and endangered species. The developers hope that the conservation goals of Skyranch will serve as a model for future projects and enhance the quality of our community.

- Only 20% of Skyranch's 515 acres is being developed, including streets, lots and utilities
- Residential areas are concentrated in two areas, conserving significant wildlife habitat and open space
- Homebuilders in Skyranch comply with all U.S. Fish and Wildlife guidelines for construction in pygmy owl habitat.

Endangered Species

Cactus ferruginous pygmy-owl

Our unique desert neighbor

This small neotropical owl, found from Argentina to the Southern United States, is at the extreme northern edge of its range in Arizona. Measuring only 6-7 inches in length and weighing a mere 2-3 ounces, this owl is a pygmy indeed. What it lacks in size, it makes up for in ferocity. This voracious little predator feeds on birds, small mammals, lizards and insects. In Northwest Tucson the bird frequently inhabits desert areas near residential development. If one is lucky, the bird's "beep, beep, beep" call may be heard at dawn and dusk during the spring in desert areas surrounding Skyranch.

APPENDIX D

PIMA COUNTY LIST OF THREATENED, ENDANGERED, AND CANDIDATE SPECIES (USFWS 2003)

PIMA COUNTY LIST OF THREATENED, ENDANGERED, AND CANDIDATE SPECIES (USFWS 2003)

1) LISTED

TOTAL = 20

Name:	**Bald eagle**	*Haliaeetus leucocephalus*
Status:	Threatened	
Description:	Large, adults have white head and tail. Height 28-38 inches; wingspan 66-96 inches. 1-4 years dark with varying degrees of mottled brown plumage. Feet bare of feathers.	
Counties:	Apache, Cochise, Coconino, Gila, Graham, La Paz, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai, Yuma	
Elevation Range:	Varies	
Habitat:	Large trees or cliffs near water (reservoirs, rivers, and streams) with abundant prey.	
Comments:	Some birds are nesting residents while a larger number winters along rivers and reservoirs. An estimated 200 to 300 birds winter in Arizona. Once endangered (32 FR 4001, 03-11-1967; 43 FR 6233, 02-14-78) because of reproductive failures from pesticide poisoning and loss of habitat, this species was down listed to threatened on August 11, 1995. Illegal shooting, disturbance, and loss of habitat continues to be a problem. Species has been proposed for delisting (64 FR 36454) but still receives full protection under the ESA.	
Name:	**Cactus ferruginous pygmy-owl**	*Glaucidium brasilianum cactorum*
Status:	Endangered	
Description:	Small (approx. 7 inches), diurnal owl reddish brown overall with cream-colored belly streaked with reddish brown. Some individuals are grayish brown.	
Counties:	Cochise, Gila, Graham, Greenlee, Maricopa, Pima, Pinal, Santa Cruz, Yuma	
Elevation Range:	< 4,000 ft.	
Habitat:	Mature cottonwood/willow, mesquite bosques, and Sonoran desertscrub.	
Comments:	Range limit in Arizona is from New River (north) to Gila Box (east) to Cabeza Prieta Mountains (west). Only a few documented sites where this species persists are known, additional surveys are needed. Proposed critical habitat occurs in Pima and Pinal Counties (67 FR 71032; 11-27-02).	

Name:	**California Brown pelican**	*Pelecanus occidentalis californicus*
Status:	Endangered	
Description:	Large dark gray-brown water bird with a pouch underneath long bill and webbed feet. Adults have a white head and neck, brownish black breast, and silver gray upper parts.	
Counties:	Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai, Yuma	
Elevation Range:	Varies	
Habitat:	Coastal land and islands; species found around many Arizona lakes and rivers.	
Comments:	Subspecies is found on the Pacific Coast and is endangered due to pesticides. It is an uncommon transient in Arizona on many Arizona lakes and rivers. Individuals wander up from Mexico in summer and fall. No breeding records in Arizona.	

Name:	**Chiricahua leopard frog**	*Rana chiricahuensis*
Status:	Threatened	
Description:	Cream colored tubercules (spots) on a dark background on the rear of the thigh, dorsolateral folds that are interrupted and deflected medially, and a call given out of water distinguishes this spotted frog from other leopard frogs.	
Counties:	Apache, Cochise, Coconino, Gila, Graham, Greenlee, Navajo, Pima, Santa Cruz, Yavapai	
Elevation Range:	3,300-8,900 ft.	
Habitat:	Streams, rivers, backwaters, ponds, and stock tanks that are mostly free from introduced fish, crayfish, and bullfrogs.	
Comments:	Require permanent or nearly permanent water sources. Populations north of the Gila River may be closely-related, but distinct, undescribed species. A special rule allows take of frogs due to operation and maintenance of livestock tanks on State and private lands.	

Name:	**Desert pupfish**	*Cyprinodon macularius*
Status:	Endangered	
Description:	Small (2 inches) smoothly rounded body shape with narrow vertical bars on the sides. Breeding males blue on head and sides with yellow on tail. Females and juveniles tan to olive colored back and silvery sides.	
Counties:	Graham, La Paz, Maricopa, Pima, Pinal, Santa Cruz, Yavapai	
Elevation Range:	< 5,000 ft.	

Habitat:	Shallow springs, small streams, and marshes. Tolerates saline and warm water.
Comments:	Critical habitat includes Quitobaquito Springs, Pima County, portions of San Felipe Creek, Carrizo Wash, and Fish Creek Wash, Imperial County, California. Two subspecies are recognized: Desert Pupfish (C.m.macularis) and Quitobaquito Pupfish (C.m.eremus).

Name:	**Gila topminnow**	*Poeciliopsis occidentalis occidentalis*
Status:	Endangered	
Description:	Small (2 inches), guppy-like, live bearing, lacks dark spots on its fins. Breeding males are jet black with yellow fins.	
Counties:	Gila, Graham, La Paz, Maricopa, Pima, Pinal, Santa Cruz, Yavapai	
Elevation Range:	< 4,500 ft.	
Habitat:	Small streams, springs, and cienegas vegetated shallows.	
Comments:	Species historically occurred in backwaters of large rivers but is currently isolated to small streams and springs.	

Name:	**Huachuca water umbel**	*Lilaeopsis schaffneriana spp. recurva*
Status:	Endangered	
Description:	Herbaceous, semi-aquatic perennial in the parsley family (Umbelliferae) with slender erect, hollow leaves that grow from the nodes of creeping rhizomes. Flower: 3 to 10 flowered umbels arise from root nodes.	
Counties:	Cochise, Pima, Santa Cruz	
Elevation Range:	3,500-6,500 ft.	
Habitat:	Cienegas, perennial low gradient streams, wetlands.	
Comments:	And in adjacent Sonora, Mexico, west of the continental divide. Populations also on Fort Huachuca Military Reservation. Critical habitat in Cochise and Santa Cruz counties (64 FR 37441, July 12, 1999).	

Name:	**Jaguar**	*Panthera onca*
Status:	Endangered	
Description:	Largest species of cat native to Southwest. Muscular, with relatively short, massive limbs, and a deep-chested body. Usually cinnamon-buff in color with many black spots. Weights ranges from 40-135 kg (90-300 lbs.).	
Counties:	Cochise, Pima, Santa Cruz	
Elevation Range:	1,600->9,800 ft.	

Habitat: Found in Sonoran desertscrub up through subalpine conifer forest.

Comments: Also occurs in New Mexico. A jaguar conservation team is being formed that is being led by Arizona and New Mexico state entities along with private organizations.

Name: **Kearney blue star** *Amsonia kearneyana*

Status: Endangered

Description: An herbaceous perennial in the dogbane family (Apocynaceae). Thickened woody root and many pubescent (hairy) stems that rarely branch. Flowers: white terminal inflorescence in April and May.

Counties: Pima

Elevation Range: 3,600-3,800 ft.

Habitat: West-facing drainages in the Baboquivari Mountains.

Comments: Plants grow in stable, partially shaded, coarse alluvium along a dry wash in the Baboquivari Mountains. Range is extremely limited. Protected by Arizona Native Plant Law.

Name: **Lesser long-nosed bat** *Leptonycteris curasoae yerbabuenae*

Status: Endangered

Description: Elongated muzzle, small leaf nose, and long tongue. Yellowish brown or gray above and cinnamon brown below. Tail minute and appears to be lacking. Easily disturbed.

Counties: Cochise, Gila, Graham, Greenlee, Pima, Pinal, Maricopa, Santa Cruz, Yavapai

Elevation Range: < 6,000 ft.

Habitat: Desert scrub habitat with agave and columnar cacti present as food plants.

Comments: Day roosts in caves and abandoned tunnels. Forages at night on nectar, pollen, and fruit of paniculate agaves and columnar cacti. This species is migratory and is present in Arizona usually from April to September and south of the border the remainder of the year.

Name: **Loach minnow** *Tiaroga cobitis*

Status: Threatened

Description: Small (< 3 inches) slender, elongated fish, olive colored with dirty white spots at the base of the dorsal and caudal fins. Breeding males vivid red on mouth and base of fins.

Counties: Apache, *Cochise, Graham, Greenlee, Gila, Navajo, *Pima, Pinal, *Yavapai

Elevation Range: < 8,000 ft.

Habitat: Benthic species of small to large perennial streams with swift shallow water over cobble and gravel. Recurrent flooding and natural hydrograph important.

Comments: Presently found in Aravaipa Creek, Blue River, Campbell Blue Creek, San Francisco River, Dry Blue River, and the mainstem upper Gila River. Critical habitat was removed March 1998; but re-proposed December 1999 and finalized April 2000. Species also found in Cattron, Grant, and Hidalgo counties in New Mexico.

*Counties with critical habitat presently contain no known existing population of loach minnow.

Name: **Masked bobwhite** *Colinus virginianus ridgewayi*

Status: Endangered

Description: Males brick-red breast and black head and throat. Females are generally nondescript but resemble other raves such as the Texas bobwhite

Counties: Pima

Elevation Range: 1,000-4,000 ft.

Habitat: Desert grasslands with diversity of dense native grasses, forbs, and brush.

Comments: Species is closely associated with *Acacia angustissima*. Formerly occurred in Altar and Santa Cruz Valleys, as well as Sonora, Mexico. Presently only known from reintroduced populations on Buenos Aires.

Name: **Mexican gray wolf** *Canis lupus baileyi*

Status: Endangered

Description: Large dog-like carnivore with varying color, but usually a shade of gray. Distinct white lip line around mouth. Weight 60-90 pounds.

Counties: Apache, Cochise, Coconino, Greenlee, Pima, Santa Cruz

Elevation Range: 4,000-12,000 ft.

Habitat: Chapparal, woodland, and forested areas. May cross desert areas.

Comments: Historic range is considered to be larger than the counties listed. Unconfirmed reports of individuals in the southern part of the state (Cochise, Pima, Santa Cruz) continue to be received. Individuals may still persist in Mexico. Experimental nonessential population introduced in the Blue Primitive Area of Greenlee, Apache, and Coconino Counties.

Name:	**Mexican spotted owl**	*Strix occidentalis lucida*
Status:	Threatened	
Description:	Medium sized with dark eyes and no ear tufts. Brownish and heavily spotted with white or beige.	
Counties:	Apache, Cochise, Coconino, Gila, Graham, Greenlee, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai	
Elevation Range:	4,100-9,000 ft.	
Habitat:	Nests in canyons and dense forests with multi-layered foliage structure.	
Comments:	Generally nests in older forests of mixed conifer or ponderosa pine/gambel oak type, in canyons, and use variety of habitats for foraging. Sites with cool microclimates appear to be of importance or are preferred. Critical habitat was removed in 1998 but re-proposed in July 2000 and finalized in February 2001 for Apache, Cochise, Coconino, Graham, Mohave, Pima Counties; Also in New Mexico, Utah, and Colorado.	

Name:	**Nichol Turk's head cactus**	*Echinocactus horizonthalonius var. nicholii*
Status:	Endangered	
Description:	Blue-green to yellowish-green, columnar, 18 inches tall, 8 inches in diameter. Spine clusters have 5 radial and 3 central spines; one downward short; 2 spines upward and red or vasally gray. Flower: pink. Fruit: woolly white.	
Counties:	Pima, Pinal	
Elevation Range:	2,400-4,100 ft.	
Habitat.	Sonoran desertscrub	
Comments:	Found in unshaded microsites in Sonoran desertscrub on dissected alluvial fans at the foot of limestone mountains and on inclined terraces and saddles on limestone mountainsides.	

Name:	**Ocelot**	*Leopardus (=Felis) pardalis*
Status:	Endangered	
Description:	Medium-sized spotted cat whose tail is about ½ the length of head and body. Yellowish with black streaks and stripes running from front to back. Tail is spotted and face is less heavily streaked than the back and sides.	
Counties:	Cochise, Pima, Santa Cruz	
Elevation Range:	< 8,000 ft.	
Habitat:	Humid tropical and sub-tropical forests, savannahs, and semi-arid thornscrub.	

Comments: May persist in partly-cleared forests, second-growth woodland, an abandoned cultivation reverted to brush. Universal component is presence of dense cover. Unconfirmed reports of individuals in the southern part of the state continue to be received.

Name: **Pima pineapple cactus** *Coryphantha scheeri var. robustispina*

Status: Endangered

Description: Hemispherical stems 4-7 inches tall 3-4 inches diameter. Central spine 1 inch long straw colored hooked surrounded by 6-15 radial spines. Flower: yellow, salmon, or rarely white narrow floral tube.

Counties: Pima, Santa Cruz

Elevation Range: 2,300-5,000 ft.

Habitat: Sonoran desertscrub or semi-desert grassland communities.

Comments: Occurs in alluvial valleys or on hillsides in rocky to sandy or silty soils. This species can be confused with juvenile barrel cactus *(Ferocactus)*. However, the spines of the later are flattened, in contrast with the round cross-section of the *Coryphantha* spines. Also the areoles (spine clusters) of *Coryphantha* are on tubercles (bumps), while the areoles of *Ferocactus* are on ridges (ribs). 80-90% of individuals occur on state and private land.

Name: **Sonoran pronghorn** *Antilocapra americana sonoriensis*

Status: Endangered

Description: Buff on back and white below, hoofed with slightly curved black horns having a single prong. Smallest and palest of the pronghorn subspecies.

Counties: Maricopa, Pima, Yuma

Elevation Range: 2,000-4,000 ft.

Habitat: Broad intermountain alluvial valleys with creosote-bursage and palo verde-mixed cacti associations.

Comments: Typically, bajadas are used as fawning areas and sandy dune areas provide food seasonally. Historic range was probably larger than exists today. This subspecies also occurs in Mexico.

Name: **Southwestern willow flycatcher** *Empidonax traillii extimus*

Status: Endangered

Description: Small passerine (about 6 inches) grayish-green back and wings, whitish throat, light olive-gray breast and pale yellowish belly. Two wingbars visible. Eye-ring faint or absent.

Counties: Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai, Yuma

Elevation Range: < 8,500 ft.

Habitat: Cottonwood/willow and tamarisk vegetation communities along rivers and streams.

Comments: Migratory riparian obligate species that occupies breeding habitat from late April to September. Distribution within its range is restricted to riparian corridors. Difficult to distinguish from other members of the Empidonax complex by sight alone. Training seminar required for those conducting flycatcher surveys. Critical habitat was set aside by the 10th Circuit Court of Appeals (May 17, 2001).

Name: **Spikedace** *Meda fulgida*

Status: Threatened

Description: Small (< 3 inches) slim with silvery sides and "spine" on dorsal fin. Breeding males brassy golden color.

Counties: *Apache, *Cochise, Graham, Greenlee, *Gila, Navajo, *Pima, Pinal, Yavapai

Elevation Range: < 6,000 ft.

Habitat: Moderate to large perennial streams with gravel cobble substrates and moderate to swift velocities over sand and gravel substrates. Recurrent flooding and natural hydrograph important.

Comments: Presently found in Aravaipa Creek, Eagle Creek, Verde River, East-West-Main and Middle Forks of the Gila River in New Mexico, and Gila River from San Pedro River to Ashurst Hayden Dam. Critical habitat was removed in March 1998, but re-proposed December 1999 and finalized in April 2000. Species also found in Catron, Grant, and Hidalgo Counties in New Mexico.

*Counties with critical habitat presently contain no known existing populations of spikedace.

2) PROPOSED

TOTAL = 1

Name: **Gila chub** *Gila intermedia*

Status: Proposed Endangered

Description: Deep compressed body, flat head. Dark olive-gray color above, silver sides. Endemic to Gila River Basin.

Counties: Cochise, Coconino, Gila, Graham, Greenlee, Maricopa, Pima, Pinal, Santa Cruz, Yavapai

Elevation Range: 2,000-3,500 ft.

Habitat: Pool, springs. cienegas, and streams.

Comments: Multiple private landowners, including the Nature Conservancy, the Audubon Society, and others. Also Fort Huachuca. Species also found in Sonora, Mexico.

Critical habitat occurs in Cochise, Gila, Graham, Greenlee, Pima, Pinal, Santa Cruz, and Yavapai Counties.

3) CANDIDATE

TOTAL = 3

Name: **Acuna cactus** *Echinomastus erectocentrus var. acunensis*

Status: Candidate

Description: < 12 inches high spine clusters borne on tubercles, each with a groove on the upper surface. 2-3 central spines and 12 radial spines. Flowers pink to purple.

Counties: Pima, Pinal

Elevation Range: 1,300-2,000 ft.

Habitat: Well drained knolls and gravel ridges in Sonoran desertscrub.

Comments: Immature plants distinctly different from mature plants. They are disc-shaped or spherical and have no central spines until they are about 1.5 inches. Radial spines are dirty white with maroon tips.

Name: **Sonoyta mud turtle** *Kinosternon sonoriense longifemorale*

Status: Candidate

Description: Primarily a pond turtle, prefers mud or sandy bottoms. Body 3½ to 6½ inches. Head and neck mottled with contrasting light and dark markings. Found in Quitobaquito Springs.

Counties: Pima

Elevation Range: 1,100 ft.

Habitat: Ponds and streams.

Comments: Species also found in Rio Sonoyta, Sonora, Mexico.

Name: **Yellow-billed cuckoo** *Coccyzus americanus*

Status: Candidate

Description: Medium sized bird with a slender, long-tailed profile, slightly down-curved bill, which is blue-black with yellow on the lower half of the bill. Plumage is grayish-brown above and white below, with rufous primary flight feathers.

Counties: Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai, Yuma

Elevation Range: < 6,500 ft.

Habitat: Large blocks of riparian woodlands (Cottonwood, willow, or tamarisk galleries).

Comments: Species was found warranted, but precluded for listing as a distinct vertebrate population segment in the western U.S. on July 25, 2001. This finding indicates that the USFWS has sufficient information to list the bird, but other higher priority listing actions prevent the USFWS from addressing the listing of the cuckoo at this time.

4) CONSERVATION AGREEMENT — TOTAL = 2

Name: **Gooddings onion** *Allium goodingii*

Status: Conservation Agreement

Description: Herbaceous perennial plant; broad, flat, rather blunt leaves; flowering stalk 14 to 17 inches tall, flattened, and narrowly winged toward apex; fruit is broader than long; seeds are short and thick.

Counties: Apache, Greenlee, Pima

Elevation Range: > 7,500 ft.

Habitat: Forested drainage bottoms and on moist north facing slopes of mixed conifer and spruce fir forests.

Comments: Conservation agreement between the USFWS and the Forest Service signed in February 1998. In New Mexico on the Lincoln and Gila National Forests.

Name: **San Xavier talussnail** *Sonorella eremita*

Status: Conservation Agreement

Description: Land snail, less than one inch in diameter (about 19mm), 4.5 whorls, round shell, white to pinkish tint.

Counties: Pima

Elevation Range: 3,850-3,920 ft.

Habitat: Deep limestone rockslide with outcrops of limestone and decomposed granite.

Comments: Conservation agreement signed by the Service, Arizona Game and Fish Department, El Paso Natural Gas Company, and Arizona Electric Power Cooperative, Inc. in September 1998.

APPENDIX E

CONSERVATION EASEMENT

RECORDING REQUESTED BY:

AND WHEN RECORDED MAIL TO:

Name

Street
Address

City &
State
Zip

SPACE ABOVE THIS LINE FOR RECORDER'S USE

CONSERVATION EASEMENT GRANT

THIS CONSERVATION EASEMENT GRANT (this "**EASEMENT**") is made this _____, day of _____ ___, _____, 200__, by Exeter LXI LLC, an Arizona limited liability corporation ("GRANTOR"), in favor of **[name of the entity]** ("**GRANTEE**").

RECITALS

A. Grantor is an Arizona limited liability corporation and is the sole owner in fee simple of certain real property located in the County of Pima, State of Arizona, more particularly depicted on the map attached as Exhibit A hereto (the "**Property**"). The execution copy of the EASEMENT also shall have legal descriptions attached as Exhibit B); and

B. GRANTEE is a public entity formed under the laws of the State of Arizona and is authorized to hold conservation easements for conservation purposes as identified in Arizona Revised Statutes §33-271 et seq; and

C. The Property possesses significant ecological and habitat values (collectively, the "**Conservation Values**"), as more fully set forth in the Federal Endangered Species Act Habitat Conservation Plan dated _____, _____ and prepared by Thomas Olsen Associates, Inc (the "**HCP**").

D. Significant portions of the Property have been identified as being potential and/or suitable habitat for species of native plants and wildlife which GRANTOR and GRANTEE desire to conserve and protect; and

E. GRANTOR intends to convey to GRANTEE the right to conserve and protect the Conservation Values of the Property; and

F. GRANTEE agrees by accepting this grant to honor the intentions of GRANTOR stated herein and

to conserve and protect the Conservation Values of the Property in accordance with the terms of this EASEMENT and the management plan which will be prepared for the Property (the "**Management Plan**"). The Management Plan will be prepared by GRANTOR and approved by USFWS, which approval shall not be unreasonably withheld, and shall be consistent with, and subject to, the terms and conditions of the HCP.

COVENANTS, TERMS, CONDITIONS, AND RESTRICTIONS

In consideration of the above and the mutual covenants, terms, conditions, and restrictions contained herein, and pursuant to the laws of Arizona and Arizona Revised Statutes § 33-271 et seq., GRANTOR hereby voluntarily grants and conveys to GRANTEE a conservation easement over the Property of the nature and character and to the extent hereinafter set forth.

1. PURPOSE

It is the purpose of this EASEMENT to assure that the Property will be maintained in an open space condition and to prevent any use of the Property that will significantly impair or interfere with the Conservation Values of the Property. GRANTOR intends that this EASEMENT (i) will assure that the Property will be used for such activities as are consistent with the purpose of this EASEMENT, and shall be implemented consistently with the Management Plan and HCP.

2. RIGHTS OF GRANTEE

To accomplish the purpose of this EASEMENT, the following rights are conveyed to GRANTEE by this EASEMENT:

a. To conserve and protect the Property in a manner consistent with the Management Plan and HCP.

b. To enter upon and traverse all portions of the Property at all times in order to (i) have access to the Property, (ii) enforce the terms of this **EASEMENT**, and (iii) to fulfill duties identified in the Management Plan; provided that such entry shall not unreasonably impair or interfere with GRANTOR's use and quiet enjoyment of the Property or unreasonably disturb natural resources on the Property; and

c. To prevent any activity on or use of the Property that is inconsistent with the purpose of this EASEMENT.

3. PROHIBITED USES

Subject to the provisions of Paragraph 4 herein, any activity on or use of the Property inconsistent

with the purposes of this EASEMENT is prohibited. Without limiting the generality of the foregoing, GRANTOR, its personal representative, heirs, assigns, agents, and potential future lessees are expressly prohibited from doing any of the following on Property:

a. Erecting of any building, billboard, or sign;

b. Use of herbicides, rodenticides, or weed abatement activities, incompatible fire protection activities and any and all other uses which may adversely affect the purposes of this EASEMENT;

c. Depositing of soil, trash, ashes, garbage, waste, bio-solids or any other material;

d. Excavating, dredging or removing of loam, gravel, soil, rock, sand or other material;

e. Otherwise altering the general topography of the Property, including building or roads or pathways;

f. Removing, destroying, or cutting of trees, shrubs, or other vegetation, except as required for (1) fire breaks, (2) maintenance of existing foot trails or roads, or (3) prevention or treatment of disease.

4. GRANTOR'S DUTIES

GRANTOR shall undertake all reasonable actions to prevent degradation or harm to the Conservation Values of the Property. GRANTOR shall undertake all necessary actions to perfect GRANTEE's rights under Section 2 of this EASEMENT, including, but not limited to, GRANTEE's water rights.

5. RESERVED RIGHTS

GRANTOR reserves to itself, and to its personal representative, heirs, successors, assigns, agents and present and potential future lessees, including, but not limited to, all rights accruing from ownership of the Property, including the right to engage in or permit or invite others to engage in all uses of the Property that are not expressly prohibited herein and are not inconsistent with the purpose of this EASEMENT. GRANTEE acknowledges that GRANTOR may be entitled to certain tax benefits or deductions for making the grant of the EASEMENT. GRANTEE hereby agrees that it will cooperate with GRANTOR, at no cost or expense to GRANTEE, in obtaining any such tax benefit or deduction; provided, however, GRANTEE shall not be required to perform any action which is in contravention to the terms of this EASEMENT.

6. REMEDIES

If GRANTOR, GRANTEE, USFWS or other interested parties determines that there is a violation of the terms of this EASEMENT or that a violation is threatened, such party shall give written notice to the other

parties of such violation and demand corrective action sufficient to cure the violation and, where the violation involved injury to the Property resulting from any use or activity inconsistent with the purpose of this EASEMENT, to restore the portion of the Property so injured. If a party fails to cure a violation within ninety (90) days after receipt of notice thereof from the other party, or under circumstances where the violation cannot reasonably be cured within a ninety (90) day period, fails to continue diligently to cure such violation until finally cured, the aggrieved party may bring an action at law or in equity in a court of competent jurisdiction to enforce the terms of this EASEMENT, to enjoin the violation, ex parte as necessary, by temporary or permanent injunction, and to require the restoration of the Property to the condition that existed prior to any such injury. If a party, in its good faith and reasonable discretion, determine that circumstances require immediate action to prevent or mitigate significant damage to the Conservation Values of the Property, such party may pursue its remedies under this paragraph without prior notice to the other party or without waiting for the period provided for the cure to expire. Each party's rights under this paragraph apply equally in the event of either actual or threatened violations of the terms of this EASEMENT, and each party agrees that the other party's remedies at law for any violation of the terms of this EASEMENT are inadequate and that such party shall be entitled to the injunctive relief described in this paragraph, both prohibitive and mandatory, in addition to such other relief to which such party may be entitled, including specific performance of the terms of this EASEMENT, without the necessity of proving either actual damages or the inadequacy of otherwise available legal remedies. Each party's remedies described in this paragraph shall be cumulative and shall be in addition to all remedies now or hereafter existing at law or in equity. Furthermore, the provisions of Arizona Revised Statutes § 33-271 et seq., are incorporated herein by this reference and this EASEMENT is made subject to all of the rights and remedies set forth therein. If at any time in the future GRANTOR or GRANTEE or any subsequent transferee or assignee uses or threatens to use such lands for purposes not in conformance with the provisions of this EASEMENT, or releases or abandons this EASEMENT in whole or in part, notwithstanding Arizona Revised Statutes § 33-271 et seq., the Arizona Attorney General, the USFWS, or any entities organized for conservation purposes shall have standing as interested parties, and as third party beneficiaries in any proceeding affecting this EASEMENT.

a. Costs of Enforcement. Reasonable costs incurred by any party enforcing the terms of this EASEMENT, including without limitation, costs of suit and attorney's fees, and any costs of restoration necessitated by a violation of the terms of this EASEMENT shall be borne by the breaching party. If a party

prevails in any action to enforce the terms of this EASEMENT, such party's costs of suit including, without limitation, attorney's fees, shall be borne by the other party.

b. No Waiver by GRANTEE. Any forbearance by GRANTEE to exercise its rights under this EASEMENT shall not be deemed or construed to be a waiver by GRANTEE of such term or of any subsequent breach of the same or any other term of this EASEMENT or of any of GRANTEE's rights under this EASEMENT. No delay or omission by GRANTEE in the exercise of any right or remedy upon any breach by GRANTOR shall impair such right or remedy or be construed as a waiver.

c Acts Beyond GRANTOR's Control. Nothing contained in this EASEMENT shall be construed to entitle GRANTEE to bring any action against GRANTOR for any injury to or change in the Property resulting from causes beyond GRANTOR's reasonable control, including, without limitation, intentional acts of third parties, trespassing, drought, flood, storm, earth movement, or other natural disaster.

7. ACCESS

GRANTEE, its successors, assigns, agents, invitees and licensees shall have the right to access the Property at all times.

8. COSTS AND LIABILITIES

Except as set forth in this EASEMENT or the Management Plan, or as otherwise agreed in writing between the parties hereto, GRANTOR retains all responsibilities related to the ownership, operation, upkeep, and maintenance of the Property.

a. Taxes. GRANTOR shall pay before delinquency all taxes, assessments, fees, and charges of whatever description levied on or assessed against the Property by competent authority, including any taxes imposed upon, or incurred as a result of, this EASEMENT, and shall furnish GRANTEE with satisfactory evidence of payment upon request.

b. Hold Harmless. GRANTOR or its successor shall hold harmless, indemnify, and defend GRANTEE and its members, directors, officers, employees, agents and contractors and the heirs, personal representatives, successors, and assigns of each of them (Collectively "Indemnified Parties") from and against all liabilities, penalties, costs, losses, damages, expense, causes of action, claims, demands, or judgments, including without limitation, reasonable attorney's fees, arising from or in any way connected with: (1) injury to or the death of any person, or physical damages to any property, resulting from any act, omission, condition or other matter

occurring on the Property, unless caused, in whole or in part, by the acts or omissions of any of the Indemnified Parties, and (2) the existence or administration of this EASEMENT.

9. ASSIGNMENT

This rights, obligations and liabilities under this EASEMENT are transferable by either GRANTOR or GRANTEE; provided, however GRANTEE shall give GRANTOR and USFWS at least thirty (30) days prior written notice of its intent to transfer. GRANTEE may assign its rights and obligations under this EASEMENT only to an organization that is (1) approved by USFWS and GRANTOR; (2) a public agency or a qualified organization at the time of transfer under section 170(h) of the Internal Revenue Code of 1954, as amended (or any successor provision then applicable), and the applicable regulations promulgated thereunder; and (3) authorized to acquire and hold conservation easements under Arizona Revised Statutes §33-271 et seq. (or any successor provision then applicable). As a condition of such assignment or transfer, the Assignee or Transferee shall agree in writing that the conservation purposes that this grant is intended to advance shall continue to be fulfilled and that the Management Plan will be followed.

10. SUBSEQUENT TRANSFERS

GRANTOR agrees to incorporate the terms of this EASEMENT in any deed or other legal instrument by which GRANTOR divests itself of any interest in all or a portion of the Property, including, without limitation, a leasehold interest. GRANTOR further agrees to give written notice to GRANTEE and USFWS at least fifteen (15) days prior to the date of any property transfer. The failure of GRANTOR to perform any act required by this paragraph shall not impair the validity of this EASEMENT or limit its enforceability in any way.

11. ESTOPPEL CERTIFICATES

Upon request by GRANTOR, GRANTEE shall within fifteen (15) days execute and deliver to GRANTOR any document, including an estoppel certificate, which certifies GRANTOR's compliance with any obligation of GRANTOR contained in this EASEMENT and otherwise evidences the status of this EASEMENT as may be required by GRANTOR. If GRANTEE fails to respond within such fifteen (15) day period it shall be deemed that GRANTOR is in compliance with all of GRANTOR's obligations contained in this EASEMENT

12. NOTICES

Any notice, demand, request, consent, approval, or communication that the parties desire or is required to give to the others shall be in writing and either served personally or sent by first class mail, postage prepaid, addressed as follows:

To Grantor: Exeter LXI LLC
c/o Mr. Scott Stitefer
Stellar Homes
5215 N. Sabino Canyon Road, Suite 100
Tucson, AZ 85750

To Grantee:

To the United States Fish and Wildlife Service: Regional Director, Region 2
U.S. Fish and Wildlife Service
500 Gold Avenue, S.W.
Albuquerque, NM 87102

With a copy to: Field Supervisor
Arizona Ecological Services Office
U S. Fish and Wildlife Service
2321 W. Royal Palm Road
Phoenix, AZ 85021-4951

With a copy to: Steven P. Quarles, Esq.
Crowell and Moring, LLP
1001 Pennsylvania Avenue, N.W.
Washington, DC 20004

or to such other address or the attention of such other officer from time to time shall designate by written notice to the other.

13. RECORDATION

GRANTEE shall promptly record this instrument in the records of Pima County, Arizona and may re-record it at any time as may be required to preserve its rights in this EASEMENT.

14. GENERAL PROVISIONS

a. Controlling Law; Conflict. The interpretation and performance of this EASEMENT shall be governed by the laws of the State of Arizona, the Federal Endangered Species Act, and other applicable

Federal laws. In the event any terms or provisions of this EASEMENT conflict with the terms or provisions of the HCP, the HCP shall control.

b. Construction. Any general rule of construction to the contrary notwithstanding, this EASEMENT shall be construed in favor of the grant to effect the conservation purpose of this EASEMENT and the policy and purpose of Arizona Revised Statutes §33-271 et seq. If any provision in this instrument is found to be ambiguous, an interpretation consistent with the purposes of this EASEMENT that would render the provision valid shall be favored over any interpretation that would render it invalid

c. Severability. If any provision of this EASEMENT, or the application thereof to any person or circumstances, is found to be invalid, the remainder of the provisions of this EASEMENT, or the application of such provision to persons or circumstances other than those as to which it is found to be invalid, as the case may be, shall not be affected thereby.

d. Entire Agreement. This instrument sets forth the entire agreement of the parties with respect to the EASEMENT and supersedes all prior discussions, negotiations, understandings, or agreements relating to the EASEMENT.

e No Forfeiture. Nothing contained herein will result in a forfeiture or reversion of GRANTOR's title in any respect.

f. Successors. The covenants, terms, conditions, and restrictions of this EASEMENT shall be binding upon, and inure to the benefit of, the parties hereto and their respective personal representatives, heirs, successors, and assigns.

g Captions. The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction of interpretation.

h. Counterparts. The parties may execute this instrument in two or more counterparts, which shall, in the aggregate, be signed by both parties; each counterpart shall be deemed an original instrument as against any party who has signed it. In the event of any disparity between the counterparts produced, the recorded counterpart shall be controlling.

IN WITNESS WHEREOF, GRANTOR and GRANTEE have entered into this EASEMENT on the day and year first above written.

GRANTOR

Exeter LXI LLC,
an Arizona limited liability company

By: JES Development, Inc.,
an Arizona corporation
Its: Manager

By: _____
Scott Stifeler, Authorized Agent

GRANTEE:

_____
Entity

By: _____
Name

_____
Title

APPROVED AS TO FORM:

_____
xxxx, Assistant Regional Solicitor
United States Department of the Interior
for U.S. Fish and Wildlife Service

Exhibit A

Map of Conservation Easement Area

To be provided at time of recordation concurrent with issuance of the ITP.

Exhibit B

Legal Description of Conservation Easement Area

To be provided at time of recordation concurrent with issuance of the ITP.